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INTO THE NATURE AND PROPERTIES
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M E D I C A L
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ADVERTISEMENT.

THE College of Physicians in London are ready to receive any Medical Papers that shall be presented to them, in order to publish the most useful.

The College think it proper to declare, that they do not, as a body, mean to vouch for the accuracy of any relation, or to give authority to any opinion contained in the papers here published.

PAPERS intended for the Medical Transactions, may be sent *to the Registrar of the College of Physicians, in Warwick-Lane.*

M E D I C A L

T R A N S A C T I O N S.

I. *The Case of a Boy Seven Years of Age, who had Hydrocephalus, in whom some of the Bones of the Scull once firmly united, were, in the progress of the disease, separated to a considerable distance from each other.* By MATTHEW BAILLIE, M.D. F.R.S. *Fellow of the Royal College of Physicians, &c.*

Read at the COLLEGE, April 1806.

WHEN water begins to be accumulated in the head of a child, before the bones of the scull are closely united, it is well known that the accumulation may ultimately become very large, that the head is proportionably increased in size, and that life may be continued under such circumstances for many months, or even

some years. When the bones of the scull have once become closely united, if Hydrocephalus should take place, it almost constantly happens, that the bones still remain firmly joined together, that the quantity of water in the ventricles is comparatively very small with what it is in the former case, that the head undergoes no increase of size, and that life is very soon destroyed. A case however has occurred to me lately of a child of seven years of age, who was affected with Hydrocephalus, and in whom the bones of the scull, which had been firmly joined together, were, by the accumulation of the water, separated to a considerable distance from each other. This occurrence, I am persuaded, is extremely rare. None of my medical friends with whom I have conversed upon the subject, have met with such an instance, and I have not found an example of it in the books which I have

have consulted. I have been prevented however by want of time from looking into so many books as I could wish.

The boy who is the subject of this paper, was brought by his mother to my house in May (1804). The pupils of his eyes were considerably dilated, his pulse was somewhat irregular, he complained of pain towards the back of his head, and was often in a state of stupor. His head was of the common size, the bones of the scull were all closely united, and his mother told me that the bones of his head had closed even more early than usual. I mentioned to her my fears that water had begun to accumulate in her son's head; I directed that a large blister should be applied to the whole of the upper surface of his scalp, and that mercury should be taken internally, along with squills and digitalis. The exact doses of these medicines which were ordered,

I do not at this time very accurately remember, nor is it of much importance to recollect them. Mercurial frictions were also employed. In the course of three or four weeks, the patient to my considerable surprise gradually recovered, but he very soon fell into a state of disease that resembled a good deal the remittent infantile fever, which however, I presume, was intimately connected with his late complaint. The last stage of disease was tedious, but he also in a great measure recovered from it, and went to Margate at the latter end of the summer to recruit his strength. There he remained about five weeks, and during the first part of his stay his strength was considerably improved, but it afterwards declined, and he returned to town in the beginning of October. His health after his return soon grew much worse, he became paralytic, first in the right leg, then in the left, and afterwards
in

in both arms. He had however but little stupor, his understanding was clear, and although the pupils of his eyes were a good deal dilated, yet his sight was very little impaired. About the end of December the two parietal bones were first discovered to be separate from each other, and this separation gradually increased till his death, when their distance from each other was three quarters of an inch. A short time afterwards, a separation was found at the coronal suture between the frontal and the two parietal bones, which gradually increased to half an inch, before the boy died. During the last week of his life he had daily attacks of convulsions, and his appetite was so much impaired, that he could hardly be prevailed upon to take any nourishment. At length after a very tedious and distressing illness he died on the 17th of March, 1805.

His head was examined in my presence

sence by Mr. Menzies, who had attended him with great constancy and humanity during the whole of his illness, and nearly a pint of water was found in the ventricles of the brain.

The great peculiarity in the progress of this boy's disease is the separation of some of the bones of the skull from each other, which had once been firmly united, in consequence of the accumulation of water in the ventricles of his brain. It may very naturally be enquired, whether there was any peculiarity in the sutures of this boy's skull, by which some of its bones, once firmly united, had, by gradual distension from within, been separated from each other. In examining the edges of the two parietal bones at the sagittal suture, the processes of union appeared to be more simple in their form, and fewer in number, than is usual in children of the same age. The same circumstances were observed in examining
8 the

the edges of the frontal and parietal bones at the coronal suture. Had the processes at the edges of these bones been more numerous, and more irregular in their form, it is very difficult to conceive how they could have been separated in the progress of this disease, from each other. If the boy had been a few years older, the same effect most probably would not have taken place; and in an adult, the bones of whose skull were united by the usual strength of sutures, it would have been impossible.

The edges of the frontal and parietal bones were thinner than is usual at the same period of life; but this effect had been probably produced by the gradual pressure of the brain against these bones, in consequence of the accumulation of water in the ventricles. Had the patient lived still longer, they would probably have become still thinner, through the continued influence of the
the

the same cause keeping up an increased action in the absorbent vessels of these bones.

The history of this case adds nothing to our practical instruction in the treatment of a disease, which, except in a very few instances, has hitherto baffled all the efforts of the medical art to remove it; but it is in itself both curious and very uncommon, and therefore may perhaps be considered not unworthy of a place in the Transactions of the College.

II. *Of some uncommon Symptoms which occurred in a Case of Hydrocephalus Internus.* By MATTHEW BAILLIE, M.D. F.R.S. *Fellow of the Royal College of Physicians, &c.*

Read at the COLLEGE, May 1806.

A GENTLEMAN, aged fifty-six, was seized with symptoms of compression of the brain on the 9th of February, 1805, and became completely paralytic on the right side, upon the 11th of the same month. By this attack he lost his recollection of the words of his own language, except a very few, which he pronounced with the greatest distinctness, exhibiting none of that thickness in his pronunciation which is so common in paralytic patients. These words, *Yes, Yes, No, No, Mr. Reed, Yesterday,* were employed upon all occasions, with a great variety of tone, to express pleasure and displeasure, joy and sorrow, to explain the circum-

stances of his disorder, and to give directions about what he wanted. He did not seem to be aware that these words were not the proper ones to express his meaning, for he often betrayed impatience when he was not understood, and was not mortified at repeating so often the same words: other words he could pronounce distinctly, but he hardly ever did it, except in repeating some word that any person in his presence had just uttered. His countenance expressed a full share of understanding, and he seemed to comprehend whatever was said or done by others in his presence. His eyes appeared in a natural state; the pupils were not dilated, and his sight was perfect. He sometimes expressed a feeling of pain in the upper part of his head, by putting his left hand there. His skin was sometimes a little hot: his pulse was sometimes between ninety and a hundred, was often of the natural frequency,

quency, but was never very slow, nor irregular.

During the first four or five months, nothing remarkable was observed in the paralytic limbs; but about six months before the death of the patient, the right foot was contracted involuntarily inwards, and the right hand was bent upwards and forwards upon the fore-arm. The fingers soon afterwards were contracted into the palm of the hand, and the fore-arm was bent upon the arm. This state of the upper extremity was sometimes attended with pain, and varied a little in the degree of contraction at different times. During the last weeks of his life, the right arm acquired so much rigidity in this posture, as to resemble in some degree the permanent attitude of a Fakir in Hindostan. Soon after the right foot was contracted inwards, the right leg was bent back upon the thigh, and the right thigh was bent upwards and forwards
upon

upon the trunk of the body. This however was not in the same degree as the bending of the right arm which we have just described. Within a few weeks of his death there was also some degree of involuntary contraction in the left leg and thigh, but there was none in the left arm. About two months also before the patient died, the right thigh and leg became much swelled, and there were even appearances which denoted a tendency to mortification; but these soon vanished, and the swelling gradually in a great measure subsided. During this uncommon disease, the bowels were for the most part rather costive: the urine was generally in the natural quantity, sometimes a little scanty, but was never remarkably deficient. In the course of so long and severe an illness, the temper of the patient was sometimes irritable, but it was often very calm, and he exhibited great kindness of disposition,

tion, which made a part of his natural character. On the 6th of January, 1806, after an illness of eleven months, he died, and, for a few days previous to his death, he was almost in a constant state of drowsiness.

At the beginning of his attack he was directed to lose blood by the arm, was cupped, and had a blister applied to his head. Some purgative medicines were ordered for him, which were continued in a milder form during the greater part of his illness. When he was languid, he was directed to take some mild tonic, and when his irritation was considerable, it was appeased by an opiate. For five or six weeks he took four grains of the *Pilulæ Hydrargyri* every night, with the view of diminishing by absorption the matter which was evidently compressing the brain; but without any advantage. Very little benefit indeed was expected from medicine from the first attack of the complaint;

plaint; but from time to time it relieved some troublesome symptoms as they occurred.

Some of the circumstances of this disease were so singular, that I had much more than a common curiosity to examine the brain after death. My patient's relations very liberally acceded to my wishes upon this subject, and the brain was examined in my presence on the 8th of January, 1806, viz. two days after he died. The membranes of the brain and its substance were perfectly natural in their appearance. The blood vessels were not too much loaded with blood, and there was no appearance of blood having been extravasated in any part of the substance of the brain. The lateral ventricles of the brain however were found to contain rather more than six ounces of water. Besides this, there was no other diseased appearance, except that the left vertebral artery was enlarged in its size, and
its

its coats had become opaque. The result of this examination very much surprised me. Although symptoms of pressure upon the brain were very strongly marked, yet none had occurred during any part of the disease, which usually denote the accumulation of water in the ventricles.

III. *A singular Case of Stricture and Thickening of the Ileum, by DR. CHARLES COMBE. Communicated by WILLIAM SAUNDERS, M.D. F.R.S. Fellow of the Royal College of Physicians, &c.*

Read at the COLLEGE, July 4, 1806.

WILLIAM PAYNE GEORGES, Esq. of a very nervous and delicate habit, had been for many years troubled with flatulency and complaints in the bowels, attended with costiveness and a quick pulse, which generally beat between 90 and 100 in a minute. Towards the end of September, 1805, he had an irregular intermittent fever. From this time all his former complaints rapidly increased. He especially complained of wind and great costiveness, and about two hours and a half or three hours after eating, of excessive pain in the bowels. So intense was this pain, that for the last three weeks he refused taking any solid food, and subsisted entirely on jelly,

jelly, broth, milk, &c. and these only in very small quantities, always dreading the pain that succeeded even this kind of food.

When he had a natural stool, it was passed in very small indurated lumps, either separate or attached together, bearing some resemblance to sheep's dung. Besides the above complaints he had been for several years troubled with an uncommon pulsation of the aorta about the region of the loins, which was not only perceptible to himself internally, but even by the hand applied externally, upon the umbilical region. This inconvenience continued to increase to the time of his death, which took place early on Sunday morning, February the 9th, 1806, at which time he was more emaciated than any person we had ever witnessed.

On the next day the body was opened by Dr. Combe in the presence of

Dr. Saunders, and the following appearances were observed.

There was not any fat between the skin and the muscles of the abdomen, or about any of the parts of the integuments. The epiploon was entirely wasted, and there was not the least appearance of fat about the mesentery or kidneys. The liver, pancreas, spleen, and kidneys were in a sound state. The stomach, though rather smaller than usual, was in a natural state, as was the duodenum, the jejunum, and the upper part of the ileum. The lower part of the ileum as far as the colon, was contracted, for the space of three feet, to the size of a turkey's quill. The colon had three constrictions, one about three inches long at the distance of seven inches from the cœcum, a second about one inch long at the distance of four inches from the former, and a third not quite
half

half an inch long at the distance of three inches from the last.

In consequence of the constriction of the ileum, and the total want of fat in the abdomen, there was nothing to support the colon in its natural situation. It had, therefore, fallen, and lay irregularly on the small intestines, and consequently there was no appearance of what is called the arch of the colon. Wherever the intestines were constricted, the coats were very much thickened, and exhibited an appearance of inflammation; while the blood-vessels, passing through the mesentery to the intestines, were enlarged. The aorta was in a perfectly natural state.

Though the lacteals are distributed to the whole of the intestines, they are most numerous about the ileum, and we believe nearly all the chyle is absorbed before the food reaches the colon. In proportion as the coats of

the intestines thicken, the absorbent power of the lacteals is diminished, and in the constricted part of the ileum in this case we believe the absorbent power of the lacteals was totally destroyed. Hence arose the general marasmus. From the ileum which lay upon the aorta, being inflamed, and therefore more irritable, and from the absence of fat which would lessen the apparent action of the aorta, Mr. Georges became very sensible of the pulsation, and suffered considerably from it. It became perceptible to the hand in the same manner as the pulse in the wrist, for so greatly was he emaciated that the finger and thumb might be placed on each side of the aorta, and be strongly sensible of the lateral pulsation. The time at which Mr. Georges perceived the great pain and uneasiness to commence after eating, corresponds with the period at which the food would naturally arrive at

at the beginning of the constriction of the ileum. The figure of the stools we apprehend arose from the constrictions of the colon.

IV. *Cases of Tetanus in consequence of Wounds; evincing the utility of relaxant medicines, and more especially of the pulvis ipecacuanhæ compositus in large and repeated doses. By J. LATHAM, M.D. F.R.S. Fellow of the Royal College of Physicians, &c.*

Read at the COLLEGE, Dec. 11, 1806.

THAT Tetanus is a disease most terrific in its attack, and most commonly fatal in its termination, are facts universally attested by every nosologist, from the days of Hippocrates down to our own times. The few cases which have terminated favorably, have contributed very little towards pointing out or establishing a regular and satisfactory method of cure. In a disease so little under the controul of medicine, the result of every fortunate experiment in practice is however worth recording.

The object of the relation of the subsequent cases is, to promote an investigation into the utility of the relaxant plan of treatment in Tetanus: and as

the practice can only be appreciated by its success, the facts are left to speak for themselves.

In the following recital of cases I have given the amount of my own experience on this subject, in which the failures as well as the recoveries are faithfully noticed. The trials made with opium, and with antimonial preparations singly, and with each of these periodically administered alternately, may possibly afford some data or hints to the practical theorist, who is desirous of obtaining an estimate of their medicinal powers in this disorder, under these different forms of exhibition. A trial of these two modes of treatment in conjunction, and also of the compound powder of Ipecacuanha, having been attended in some cases with the most complete success, is recommended to other practitioners, as deserving of further trials.

The first case which more especially called my attention to this subject, occurred

curred to Mr. Hawkins of Croydon, who stopped me in the street to enquire where he might find our common friend Mr. Long, as he wished to inform him that the patient whom they had seen together a few days before, for a bruise about the elbow, had been seized with locked-jaw. In our conversation respecting it, he asked me if I knew how to cure it: I told him that I had never yet been successful in a single instance, but that in the first case which should occur to me, I had determined to push boldly the relaxant plan, and give large and repeated doses of James's powder. He without hesitation stated his determination to try the method suggested, but doubted whether he ought not to persist in the use of opium; which however he had hitherto been giving without any manifest advantage.—It was agreed that he should still continue the usual remedy; the powder and the opium were given *alternately*;—

the result was favourable, for in the course of a few weeks, I had the satisfaction of knowing that the patient had perfectly recovered.

The next case occurred to me in St. Bartholomew's Hospital: the patient's hand had been bruised dreadfully, and one of his fingers crushed to pieces. A locked-jaw with almost universal tetanus succeeded; and such was the violence of the muscular spasm every ten minutes, that it seemed very likely soon to put a period to his sufferings:—I directed for him five grains of James's powder every four hours, and for several days had the satisfaction of finding that the muscular rigidity diminished, and that the convulsive motions of the system were less painful and less frequent. So much benefit seemed manifestly to have been produced, that I was firmly persuaded that a cure was about to be effected, and at the desire of the pupils who were very anxious about the case, I
made

made it the subject of a clinical lecture, in the course which I was then delivering at the hospital. The publicity of the case became, as I then strongly suspected, the cause of our disappointment; for the pupils propagating the favourable report which the apparent advantage derived from the powder had enabled me to make, a constant succession of visitors unfortunately interrupted that progress which the patient seemed to be making towards a complete recovery. His spasms returned with violence, and the jaw which had become considerably relaxed, was now much more rigid. In consultation it was determined to remove the finger, and to give opium in large doses: the original plan was then forsaken, and in the course of the next day a dreadful recurrence of spasm, which had indeed throughout the night violently tortured him, put an end to his existence.

The third case of Tetanus was
caused

caused by the patient's treading upon a nail, which produced a slight wound in the foot, but which healed in a day or two without surgical assistance or any difficulty. The gentleman lived in Wood-street, and was then attended by his own physician, who desired a consultation upon his case, as the means which he had already tried had not produced any beneficial effect. He readily agreed with me as to the propriety of trying James's powder and opium, which were given *alternately* as in the first recited case: and in a consultation which a few days afterwards was had with a third physician, we determined from the advantage which we thought had been gained, upon persevering in the plan. For some days we had so much encouragement to hope for success, that the other consulting physician as well as myself, had actually fixed a more distant period than usual for our next meeting; but on the following day a sudden

sudden succession of the most violent spasms seized the patient, and in a few hours unhappily destroyed him.

Those only who have had their expectations suddenly frustrated, which in one instance had been verified by experiment, can sufficiently appreciate the mortification which I felt on the unfortunate event of the third case: all the opinions which I had fondly cherished were directly overthrown, and what I had hitherto thought very feasible, I was greatly disposed to abandon. I reflected however that one case in three had turned out successfully, and therefore hoped that the application of the same theory under another practical form, might perhaps succeed better: I thought I saw in the compound powder of Ipecacuanha of our College, that union of sedative and relaxant powers which might possibly serve me, and therefore kept it in my mind, determined to try it whenever chance might throw
another

another case of Tetanus in my way. Two or three years elapsed before such a case occurred, when I put into practice the resolution I had formed, the fortunate event of which the following account, taken at my request, by my friend Dr. Gower, then one of our medical pupils at St. Bartholomew's Hospital, will sufficiently demonstrate.

“ John Triggs, a middle sized, strong-built man, aged twenty-five, by employment a groom, had the misfortune to have a fall from his horse on Tuesday, the 23d of October, 1798. It was not discovered that he had received any other injury than a slight wound on the outer angle of the right leg, which was healing very kindly under the care of Mr. Blicke, in St. Bartholomew's Hospital, into which he had been, immediately after the accident, admitted.

“ On the 30th of October, the wound

wound was almost closed, when he was suddenly seized with a rigid sensation about the muscles of his neck, which, as he described it, held his head firmly down, as if bound with cords: his lower jaw became affixed to the upper with little or no power of extending it, and his whole body, and especially his wounded leg, was affected by spasms. In the more severe attacks he felt a violent pain under the sternum, leading upwards from the scrobiculus cordis, in the direction of the ensiform cartilage.

“ At the beginning his pulse beat 120 strokes in the minute, he sweated profusely, and numerous miliary eruptions appeared about the wrists. On the following day, October 31st, he was visited for the first time by Dr. Latham, who ordered ten grains of the Pulvis Ipecacuanhæ compositus every four hours with Ol: Ricini occasionally: the wound was at the same time

time dressed with a common bread and milk poultice, and he was kept on the milk diet of the hospital.

“ On making frequent enquiries concerning his feelings, he said he thought himself gradually becoming better, his pains and spasms having abated, and his jaws admitting of a thin slice of bread soaked in milk. In a few days he could put the point of his thumb between his teeth, though not without exerting some force; and a regular amendment continued till the 12th of November, when the pains under the sternum returned, the affected limb became spasmodic, with twitchings in various parts of his body and profuse sweating. These unfavourable symptoms were supposed to have arisen from his imprudent omission of the *Oleum Ricini*, for they were much alleviated by a proper evacuation of the bowels. On the 13th he was better, but there
being

being a continuance of the spasms in a slight degree, the Doctor shortened the intervals between the administration of the medicines from every four to every three hours. On the 14th a perceptible advantage was observed from the increase of the quantity of the Pulv. Ipec. comp. within the last 24 hours. He was now more comfortable, his jaws admitting of wider distension, and allowing him to take larger quantities of food. In this manner he proceeded, daily improving, until the 18th, when the poultice was thrown aside, and the wound was again attempted to be healed. Appearances continuing to be favourable, the time of administering his medicines was altered on the 20th from every three to every four hours. On the 23d he was so greatly recovered that he was ordered to take Decoct: Cinchonæ ʒxiv: cum Tinct: Cinchonæ ʒj. every six hours, and the
time

time of giving the Pulvis Ipec. compositus was altered from every four to every six hours.

“ His appetite grew so keen, and he gained strength so rapidly, that on the 4th of December the milk diet was changed to that of meat, and he was allowed to get out of bed.

“ Every symptom having disappeared, and the wound being healed, he was discharged from the hospital on the 13th of December.”

It is worthy of remark, that during the whole time of taking the Pulvis Ipecacuanhæ compositus he felt no unusual inclination to sleep, although in every ten grains of it he was swallowing one grain of pure opium, and that too every four hours, and sometimes oftener. He complained of no other inconvenience from it than a continued sweating, with a trifling degree of debility from being kept so long in bed.

The benefit derived from the Pulvis

Ipecacuanhæ compositus was so very obvious, that in another case soon afterwards admitted into the hospital, where the symptoms however were not so violent, but where the disease consisted mostly in a spasmodic rigidity of the muscles of the lower jaw, the medical pupils became anxious for its trial, in which my colleague Dr. Roberts obligingly indulged them. I do not however lay much stress upon this case, because I have some reason to think that from the irregularity of the patient's conduct, his medicines were not always properly administered; but the history of it will shew a rapid and favorable alteration of the symptoms, and therefore, with the Doctor's permission, I here insert it as copied from Dr. Whitter's notes, who was then one of our medical pupils.

“ John English, fifty-five years of age, a farrier by trade, received a wound on the heel from the kick of a horse,

horse, about three weeks ago, which has been going on very well: he has a cough, and his breathing is rather difficult. In other respects he has enjoyed good health. On the 13th of January the house apothecary was called to him, and ordered him Pulv. Ipec. composit. gr. x. every four hours. This day, January 15th, he can scarcely open his mouth half an inch, notwithstanding the symptoms were not decidedly those of locked-jaw before yesterday, and he has frequent sharp pains shooting from the bottom of the abdomen upwards: the compound powder of Ipecacuanha was discontinued, and he was directed to take Julep. Ammon. cum Ol. 1 oz. et tinct. opii. gr^{tt}. x. 4^{tis}. horis. A blister was applied to the chest, and a common linctus prescribed for his cough. 16th. He had a better night, but the spasms continue, pulse 120 strokes in a minute, soft and full, is costive: an enema was ordered in the

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evening,

evening, and directed to be repeated when necessary. 17th. No sleep last night, complains much of violent shooting pains about the groins and pudenda: he thinks his jaws more free, cough continues, has been in a profuse perspiration ever since the 13th.—18, 19, 20. Sweat very great, but the pains are undiminished. 21st. The wound is nearly healed, he opens his mouth wider, has frequent spasms in his legs, groins, and abdominal muscles; pulse as before; does not sweat so much. 22d. The spasm to-day draws him backwards, and is so violent that he seems quite stiff throughout the body. He was now again directed to take ten grains of the Pulv. Ipec. comp. every four hours, and an almond emulsion with opium. An emollient cataplasm was applied to the wound; every thing else was omitted. 23d. His breathing is very short to-day, but his cough is trifling: the spasms keep his lower extremities quite

quite stiff, and are particularly violent up the back. 24th. As yesterday. 25th. Has great difficulty in swallowing his medicines, has a pain under the sternum. 26th. Will not take his medicines; he lies still most part of the day, but is very restless by night. 27th. Seems somewhat better, and takes his medicines; he opens his jaws at least half an inch, and the spasms are not so frequent. 28th. He seems much as yesterday, except that the stools are involuntary. 29th. Spasms not so frequent. 30th. The rigidity is so far removed as to allow of pillows being put under his shoulders. 31st. Only has the spasms when he attempts to move, or is touched by his attendants. February 4th. Is able to walk across the ward if assisted, but the spasms frequently draw him up on his toes. 6th. The compound powder of ipecacuanha was now ordered every six hours, his other medicines were continued, and he was
allowed

allowed a pint and a half of porter every day; and put upon the meat diet. On the 9th the spasms were much less frequent; he chiefly complained of cough and dyspnœa, his appetite was good, and the wound quite healed. On the 11th the spasms were quite gone, although he felt pains in his back and lower extremities. On the 20th Dec. *Cinchonæ cum conf. aromat.* was substituted for all other medicines, and in a few days afterwards he was discharged perfectly well."

At the very time that was arranging the histories of the foregoing cases, and considering the probable efficacy of *Pulvis Ipecacuanhæ compositus* in the cure of this disease, Mr. Eaton, an apothecary in Holborn, wished me to see his relation who was his shopman, and who from cutting his hand by corking a bottle about three weeks before, had been labouring for three days under the very worst possible state of Tetanus. For his better accom-

accommodation Mr. Eaton had removed his patient to Somers-Town, who was then attended by Mr. Ford of Golden Square. The account which he gave me of the young man's sufferings was distressing in the extreme, and he added that, in his opinion, as well as in that of Mr. Ford, nothing was likely to serve him ; but that for his own satisfaction, as a relation, he was desirous that I should see him. I took from my drawer the very cases above recited, and read them to him, under the idea of encouraging him to persevere with resolution in the plan which I proposed. He was accordingly ordered to give his patient ten grains of Pulvis Ipecacuanhæ compositus every two hours until I visited him, which I promised to do early in the morning. On seeing him according to my promise, I found him (as he expressed himself) not worse, but, as he thought, a little more comfortable : I therefore directed him to persevere

severe

severe in the use of the powder, which he continued regularly to take almost twenty days. During this time the spasms were occasionally very dreadful ; for he was usually drawn into an irregular arch, his head and his feet forming its two extremities : his urine was often forced from him by the violence of the spasms, and his belly was frequently drawn inwards, and very obstinately constipated. Fully sensible of his situation, he not only persevered in the use of his medicine with astonishing resolution, but of his own accord took two or three times a day ten or twelve drops of tincture of opium. Although his jaws were so locked together as scarcely to admit at any time the edge of a shilling, yet he contrived to get the medicine into his mouth, either by squeezing it, when made into a soft bolus, through the small aperture which his utmost efforts could make, or by taking it as occasion allowed him in a liquid form.

The comparative degree of ease which he sometimes experienced encouraged him to go on, notwithstanding the sudden recurrence of the spasms, and the violence of them each time, which nearly hazarded his very existence. I purposely omit in my account of this case many circumstances, such as the regulating his bowels by clysters or by castor oil; the giving broths or light nutritious liquids; the allowing a little portion of wine diluted with water, when sudden faintness or deliquium supervened. Such arrangements of course were made as occasions required; but I more especially wish to lay stress upon the facts that the compound powder of ipecacuanha was never once omitted, as I believe, for more than a fortnight, that it never induced any remarkable drowsiness, that the perspiration was generally great, although not immoderate, and that nothing like sickness occurred until the 17th or 18th day, when
he

he appeared to those about him suddenly to be giving way,—but on vomiting a little glairy fluid he found relief, and the alarm of his friends ceased. Until this time his amendment had been gradual; but after this sudden deliquium and sickness, and a further relief obtained by evacuating the bowels, his spasms seemed greatly to abate; and now for the first time he began to dislike the powder, which indeed did not longer seem very necessary, but which was nevertheless given in smaller doses and at greater intervals. He was now directed to take wine more freely, and to begin a course of bark in decoction with the tincture and aromatic confectio. In a week from this time he rapidly recovered, and in a few weeks afterwards was enabled to attend to his business as usual.

After two or three years, a piece of glass which had been gradually making its way, was extracted by Mr. Ford,
from

from between the thumb and first finger of the patient's hand. Mr. Ford, who saw this case in the first instance, and who kindly called occasionally upon the patient during the continuance of the complaint, declared to me, that of all the cases which he had seen (ten or twelve), this was by much the worst.

On reviewing the cases which have been thus detailed, I am not bold enough to suppose that by the mode of treatment adopted, the disease is stripped of its terrors, or that the obscurity in which it has been enveloped is removed. The paucity of the experiments will not at present admit of any general conclusions: all the use therefore that is intended to be made of these, is to recommend them as sufficient to warrant the further trial of the same remedy in similar affections, in order finally to confirm or invalidate the presumptive proofs of its efficacy here

here adduced, by the results of a more enlarged experience.

It is agreed on all hands when Tetanus does not destroy the patient in the first few days of its attack, but runs on, if it may be so said, into a chronic form, that the danger in proportion to the duration of the complaint diminishes : for like other diseases of the system attended with febrile action, if the first stage of it is moderated, a favourable termination may be expected. I wish indeed that thus in practice we might generally be able to employ our theoretical speculations, and that time sufficient might be allowed us to improve the hints which I have ventured to throw out ; but in Tetanus the opportunity soon slips away, if we do not immediately bring our ideas, imperfect as they may be, to the test of experiment. Whatever predisposing cause therefore may be supposed to influence

ence the production of this disease, and whatever morbid susceptibility of system may favor its formation, let us act instantly and vigorously: let us consider the disease on the same broad scale as other acute diseases which affect the whole system, and immediately by relaxant and sedative powers combined, moderate the excess of action, and if the disease should fortunately remit so as to allow of the propriety of the exhibition of tonic or other correspondent powers, let us, as in other general diseases, adapt them when necessary to existing circumstances. Viewing Tetanus in this light, something may perhaps be done towards a more rational and efficient mode of treatment; and if hereafter any one point shall be considered as fairly established for our guidance in future practice, let it not be thought too vain in us to indulge a hope that the well known aphorism of the father of physic,

physic,

physic, which pronounces that “*spasm in consequence of a wound is fatal,*” may not be admitted as incontrovertibly and universally true.

V. *Remarks on Tumors, which have occasionally been mistaken for Diseases of the Liver.*
By J. LATHAM, M.D. F.R.S. *Fellow of the Royal College of Physicians, &c.*

Read at the COLLEGE, December 11, 1806.

IT happens frequently, I fear, that enlargements of some of the abdominal viscera are confounded with those of the liver. I have seen cases in which all the symptoms of diseased liver have been produced by the pressure of schirrous pancreas on the biliary ducts, as appeared on examination after death. I have oftener observed in females the same circumstances occurring from an enlargement of the right ovarium. I do not know however that errors of judgment in these cases have ever eventually injured the patient by leading to an erroneous practice, as it fortunately happens that the same deobstruent remedy which one would always employ in a turgescence of the liver is generally
8 tried

tried also in tumors of any other viscus. But it is not pleasant to us to perceive that we have been mistaken as to the particular organ affected, and it is still less agreeable to a patient's friends to find out that we have been combating, as they would generally represent it, a disease which was unknown to us. The yellowness of the skin is of itself an insufficient symptom to fix our diagnosis, nor will the additional appearances of white stools and saffron-coloured urine always enable us to make an unerring determination: I will endeavour therefore to point out some circumstances by which a more accurate judgment may be formed, notwithstanding I may not be able to propose any improvement in the mode of treatment.

I take it for granted that nobody can easily mistake an *inflammation* of the liver: the pain in the organ (either acute when its investing membrane is affected, or obtuse when its parenchymatous

chymatous substance suffers) and the febrile exacerbations regularly consequent thereupon, will sufficiently mark this disease: neither, if the liver can readily be felt, and if the usual icteric symptoms be present, can we be very much deceived as to the viscus affected; but when, perhaps for the first time, a patient is only conscious of pain, when his physician investigates his case by pressure about the right hypochondrium and scrobiculus cordis, when his appetite has gradually failed him, when he is troubled with eructations, and his stools have been clayey and adhesive, then I suspect that the liver is becoming inactive, notwithstanding the skin and eyes may yet be clear and the urine scarcely tinged with bile. If pressure discovers a deeper seated uneasiness under the scrobiculus cordis, but neither enlargement nor pain in the right hypochondrium; and if the patient tells me that although his appetite is not

amiss, yet eructation and vomiting commonly follow his meals, I then suspect, notwithstanding the eyes and skin may be yellow, the urine full of bile, and the stools without any, that the pancreas alone may be the organ affected, which pressing upon the stomach produces nausea and sickness, and obstructing the passage of the bile through the hepatic ducts occasions every symptom of an *apparently* diseased liver. If, without any perceptible hardness of the liver, I observe the true characteristic yellowness of the eyes and skin and urine, notwithstanding pain should be acutely felt in the direction of the biliary ducts, yet if (the pain not remitting) the fæces should sometimes be well tinged with bile, and at other times be without any such appearance, I should suspect that the symptoms were produced by an indurated pancreas. If an acute pain is constantly felt in the direction of the biliary ducts, and strikes through

through to the back with that sort of sensation as if something was affixing the liver thereto, whether the fæces be tinged with bile or not, a biliary concretion either in the ductus cysticus or in the ductus communis chole-dochus most probably produces it.

But a diseased ovarium more commonly than an enlarged pancreas produces by its pressure upon the biliary ducts every symptom of indurated liver. The delicacy which is properly due, and is rightly observed in every disease of females, too often however hinders that examination which in its early stages would always lead us to a just distinction. We are told that there is a fulness in the right side; we see clearly that there are icteric symptoms, but we thence conclude too hastily that the disease is in the liver. In this as in the case of indurated pancreas, the appearances of the skin and urine and fæces will vary, and hence also we have at once

a *presumptive* proof that the liver is not the *permanent* seat of the disease. We should therefore immediately solicit an examination, which will usually put the matter beyond all doubt: for I believe upon pretty strong pressure the ovarium, when enlarged, will be traceable as ascending from a circumscribed base from below upwards, and the liver (as in all women, whether it be diseased or not, this organ may usually be felt) will be found by an equal pressure descending from above downwards; but between one viscus and the other, whether ovarium or liver, the same degree of pressure will I think always discover a sort of chasm or space, denoting a termination of the enlargement: *below*, therefore, the enlarged viscus must be the ovarium, *above* it will be the liver. I do not however mean to say that in all possible cases this mechanical sort of distinction must necessarily hold good; yet in the early stages of the disease

disease it will never, I believe, mislead us, and in the later periods of it, with exact attention to collateral circumstances, it will seldom fail. I will not here mention any other tumors of the abdomen, as these are easily enough to be distinguished from enlargements of the liver: for such only which are manifestly attended with icteric symptoms, and are thence liable to be confounded with real hepatic disease, can regularly come within the scope of my present observations.

I have little to observe upon the method of treatment: every one knows what is necessary in diseased liver, and what is usually employed in its cure. This part of the subject however I am not now expected to dilate upon; but few of us understand how the progress of disease, either in the pancreas or in the ovarium, can be arrested; for in their more advanced stages I believe them to be incurable. Mercurial remedies will no doubt be tried in
these

these as in other abdominal enlargements; but I have experience enough to know that they must not be urged too violently. It is a good maxim among surgeons not to irritate a tumor which they cannot extirpate: the same doctrine in a medical sense is more particularly applicable in the cases under consideration; if I failed therefore in procuring relief by small quantities of mercury, either alone or combined with a sedative, I would trust almost entirely to some narcotic medicine, such as cicuta perhaps in gradually increased doses; I would enjoin very moderate exercise, the mildest diet, and a purely aqueous regimen without spirit, wine or beer. I would regulate the bowels by the gentlest laxatives; and as bathing is found serviceable in many cases besides those which are more strictly strumous, I would advise the tepid bath, and if within the patient's ability, the warm sea water baths upon the

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the coast. Under the same idea too of strumous affection, I would not omit the cinchona, which might be given in decoction, with soda, at the same time that the narcotic is administered. This plan however I must be understood as advising more from theoretical analogy, than from any great experience of its utility.

VI. *Of a peculiar Affection of the Eyes, with Observations.* By W. HEBERDEN, M.D. F.R.S. *Fellow of the Royal College of Physicians, &c.*

Read at the COLLEGE, Jan. 7, 1807.

IN the first volume of the Medical Transactions, some account has been given of the Nyctalopia, or Night-blindness; and I have thought the following case, which lately occurred to me, by exhibiting a singular variety of this disease, might not be deemed unacceptable, every new fact tending in some measure to render more perfect the history of a disorder so little known in this country.

In the month of July, 1806, a lady of advanced age went from London to the eastern coast of Kent, where she lodged in a house looking immediately upon the sea, and of course very much exposed to the glare of the morning sun. The curtains of the bed in which she slept, and also
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of the windows, were of white linen, which made her apartment very light. When she had been there about ten days, she observed one evening, at the time of sun-set, that first the fringes of the clouds appeared red, and soon after the same colour was diffused over all the objects round her. It was particularly conspicuous when she regarded any thing white, as a sheet of paper, a pack of cards, or a lady's gown. This lasted the whole night. The next morning her sight was perfectly restored. But as the evening advanced, the same appearance came on again ; and it continued to do so regularly every evening, as long as she remained at that place, which was three weeks from the commencement of her complaint ; the natural vision always returning in the morning. Six days after she had left the coast, I saw her in London still subject to the same affection ; and she has since informed me that it persevered a fortnight longer, and

and then of its own accord ceased suddenly and entirely. While it was upon her, the sight seemed to be no otherwise impaired than by the degree of indistinctness necessarily produced by this unnatural colour, which overspread all her view.

There seems great reason to suppose that this lady's complaint was brought on by her being exposed to an unusual glare of light. Previous to this she had been harassed by a cold and cough, which had hung upon her longer than usual, but she had suffered no disorder in her eyes.

In the case formerly laid before the College, the blindness seems to have occurred only, when the man who was the subject of it was on board a ship. And it is evident how great a splendor of light surrounds a person on the deck of a vessel, open to an unbounded expanse of sky above, and to a constant reflexion from the water beneath. It does not indeed follow that every
body

body so situated must be similarly affected; yet where there exists, from constitution or from accident, a disposition favourable to such disorders, I conceive they may very naturally be called forth by continued exposure to a strong light.

The accounts which have at different times been given of the Night-blindness, afford great support to this opinion; for it is described as frequently occurring under the blaze of a tropical sun. And there, as well as in countries where it is less common, it is found most among those who are most exposed to the open sky; therefore in the West Indies it is particularly seen among the negroes*. At other times it has affected sailors in their passage near the equator†. I am informed likewise that several of our soldiers in Egypt, in Malta, and at Gibraltar, have had similar complaints;

* Hillary's Observations in Barbadoes.

† Mem. de la Soc. Roy. de Medecine, ann. 1786.

and in all places those, whose occupations oblige them to remain out of doors, are described as being the principal sufferers ; as if the nerve were so numbed by the vivid rays of the sun, as to be rendered insensible to the impressions of a feebler light, as we must all in some degree have experienced upon first entering a dark chamber from the sunshine of a summer's day.

The Nyctalopia was not unknown to the ancients, several of whom have mentioned it in their writings. But the most complete history I have seen, is to be met with in the *Memoires de la Societ  Royale de Medecine* for the year 1786. There is in that work an account of its being endemical in certain districts, particularly in the neighbourhood of Roche-Guyon, situated on the banks of the Seine, half way between Paris and Rouen. In one village it is said to affect one twentieth, in another one tenth of the inhabitants every year.

It comes on in the spring, and usually lasts about three months. Sometimes it returns again in the autumn, but it is then slighter. The subjects of it are the labourers in the fields, of either sex ; and it is perhaps worthy of notice, though little stress is laid upon it by the author of the Memoir, that the soil is chalk. Some had experienced the complaint every year for twenty years : watery eyes are said to be common there about the same time, but do not appear to be any way connected with the Nyctalopia. When the disorder is past there is usually no inconvenience of any kind remaining; though in a few the eyes have been afterwards weak, and impatient of light or of wind.

Very few instances of the Nyctalopia have been recorded in England. In one of the early volumes of the Philosophical Transactions, a singular case is mentioned of a gentleman's servant, in whom something of this
kind

kind seems to have been constitutional; for as far back as could be traced, he had always been subject to such a degree of blindness every evening, that he was only able very imperfectly to distinguish the objects about him, though he could see with great clearness as long as the sun was above the horizon. There was no visible defect in his eye, nor any circumstances in his health to which this peculiarity could be referred.

A disease, the opposite to this, sometimes occurs, in which people are able to see at night, but are blind in the day. It seems to arise from too great a sensibility in the retina, which is overpowered by a strong light. In the people known by the name of Albinos, this is now understood to be occasioned by a defect of the pigmentum nigrum, which should line the back part of the eye. Persons of this description have occasionally been met with in many different parts of the world;

world; their pupil is of a pink colour, and their hair quite white. But the day-blindness, if I may so call it, is not solely attributable to this cause; for Ramazzini * has described it among the peasants of Italy employed in agriculture, in whom he observed no other peculiarity, but that their pupils were very much dilated. He says the disorder comes on about the vernal equinox, with such a dimness of sight, that the people, who are affected by it, lose their way in the fields; but at the approach of night are again able to see distinctly, and in the course of the succeeding month they recover their natural sight.

In the brute creation we observe that the eye is so constituted as sometimes to love a strong light, sometimes a weak one; and while most animals see best in the day, some prefer the darkness of the night. Such being

* De morbis artificum.

the varieties of which this organ is capable, it should not excite our surprise, if in mankind, among a great number of individuals, we meet with some deviations from its ordinary state : these may properly awaken our attention to the blessings we generally enjoy, and lead the mind to contemplate with increased fervor of gratitude and adoration the delightful scenes of creation, which are thus opened to us, and the admirable adaptation of the human faculties to the station we are appointed to fill.

VII. *Some Observations on the Scurvy.* By
W. HEBERDEN, M.D. F.R.S. *Fellow of
the Royal College of Physicians, &c.*

Read at the COLLEGE, Jan. 7, 1807.

THERE is no part of the history of diseases more interesting, or more instructive, than that which treats of the prevalence, or disappearance, of particular disorders, and at the same time traces out the causes from which these variations proceed. As however the changes, which take place, are never very rapid, it is often difficult to collect a sufficient number of well authenticated facts, to establish any certain conclusions. I have already attempted something of this sort in a small work, which was published a few years ago, on the increase and decrease of diseases; and it is my design at present to point out some circumstances of the same kind, which appear to be very well worth notice, respecting the Scurvy. Indeed I

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scarcely

scarcely know any thing more remarkable, than the almost total extinction of this disease, once so formidable to our Navy. It is notorious that the fleet under captain (afterwards Lord) Anson, in the year 1741, lost by the Scurvy alone above half their crews, in the space of six months from the time they left England: whereas captain Cook, and after him other navigators, have been able, in their longest voyages, to preserve their men entirely free from it. In this instance the alteration has taken place recently, and almost within our own observation. But it is not so generally known, that the Scurvy was formerly prevalent on land also, as well as on board a ship; and that it is by the operation of similar means, that the disease has been suppressed in both situations.

Ettmuller describes England as particularly subject to it: "*præ aliis Belgæ et Angli scorbuto sunt obnoxii*." He is followed in this by Boer-

Boerhaave: “ invenitur apud Britan-
“ nos, Batavos, Suecos, &c.” Syden-
ham indeed observes (what by some
strange fatality seems always to have
been the case with this disease,) that
many complaints nowise allied to it
often passed under that name; but it
does not appear from his writings, that
the real Scurvy might not also fre-
quently occur: “ hic obiter, sed et
“ libere tamen dicam, quod licet nul-
“ lus dubitem quin scorbutus in his
“ plagis borealibus revera inveniatur;
“ tamen eum morbum non tam fre-
“ quentem, quam vulgi fert opinio,
“ occurrere persuasum mihi habeo.”

He moreover mentions in his “ pro-
“ cessus integri,” the genuine signs of
the Scurvy, and the method of cure;
which he hardly would have done,
had it not been much more common
than it is at present. Willis, who
wrote a particular treatise on this sub-
ject, in like manner takes notice of
the frequent misapplication of the

name, but nevertheless describes it in its true characters as being very common: “*ægritudo multis in locis endemia, et ubique fere sporadica.*” Charleton also declares, “*scorbutus in his regionibus septentrionalibus est morbus endemius.*” To these testimonies I may add that of Hodges, who, in his history of the plague, says, “*epidemica multo ante apud nos affectio scorbutica.*” For, that he is speaking of the true Scurvy, appears from his going on to point out the distinction between the spots of the plague, and those which are thrown out by this disease. Dr. Musgrave, in his book “*De Arthritide symptomatica,*” published in the year 1703, informs us that the same disorder continued in certain parts of the country in his time: “*Agri Somersetensis, uliginosi magnam partem et depressi, æerem crassum et humidum trahentes incolæ maculis subnigris, ulceribus malignis, cru-*
5
“ rum

“rum dolore, respiratione difficili,
 “lassitudine spontanea, nervorum
 “debilitate, hydrope, gangræna, et
 “istiusmodi aliis scorbuti exquisiti
 “signis creberrime divexantur.” The
 Bills of Mortality would not deserve
 to be noticed in reference to an article
 so liable to error, were it not for their
 perfect agreement with the above ac-
 counts. The first twenty bills, that
 is, from 1657 to 1677, give an aver-
 age of sixty deaths every year under
 this head; whereas since the begin-
 ning of the eighteenth century, the
 number has seldom exceeded five or
 six; and I apprehend there can be
 little doubt but these, with very few
 exceptions, are ascribed to a wrong
 cause.

The present rare appearance of this
 disease ought unquestionably to be
 attributed to the same circumstances,
 which have freed us from the dysen-
 tery, the remittent fever, and the
 plague itself.

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Any body, who will be at the pains to compare the condition of London, and of all great towns in England, during the seventeenth century, with their actual state, and note the corresponding changes which have taken place in diseases, can hardly fail to consider cleanliness and ventilation as the principal agents in producing this reform. And to these may be added, especially with regard to the disorder immediately under consideration, the increased use of fresh provisions, and the introduction of a variety of vegetables among all ranks of people. The same spirit of improvement, which has constructed our sewers, and widened our streets, and removed the nuisances with which they abounded, and dispersed the inhabitants over a larger surface, and taught them to love airy apartments and frequent changes of linen; has spread itself likewise into the country, where it has drained the marshes, cultivated

tivated the wastes, enclosed the commons, enlarged the farm-houses, and embellished the cottages. I believe few, even of physicians, are aware of the extensive influence of these measures. Few have adverted, with the attention it deserves, to the prodigious mortality occasioned formerly by annual returns of epidemical fevers, of bowel complaints, and other consequences of poor and sordid living, to which we are now entire strangers.

During nearly ten years, that I was physician to St. George's Hospital, the following were the only cases, that fell under my care, which bore any relation to the true Scurvy. I have thought fit to detail these, not only as presenting a faithful account of a disorder, which is become very rare amongst us; but also as throwing additional light upon its real nature, and the circumstances which are principally concerned in its production.

Daniel Berry, a tall, thin, middle-aged

aged man, was admitted into St. George's Hospital, on the 27th of May 1795. He said he had always enjoyed a good state of health, previously to his present illness, which had been coming on above a fortnight. His first complaint was a pain in both his heels, and an unusual lassitude, and shortness of breath upon motion. The pain soon after extended up his legs to his knees, attended with stiffness in the hams: and about the same time he observed his gums to bleed on the slightest touch. They appeared inflamed and spongy. To these symptoms was afterwards added, what he called "a blackness of his thighs;" which upon examination was found to arise from an effusion of blood under the skin, occupying the lower half of the interior and under part of both thighs, resembling in its appearance the effects of some considerable bruise. The edges of the black parts were everywhere of a yellow

low colour; and this colour was also continued upon the upper part of each leg; but there was very little of the blackness to be seen upon the legs. He had a remarkably unhealthy sal-low countenance. His pulse beat between 70 and 80 times in a minute; and he had some appetite.

This man was by trade a tailor, and lived in London. He was married, and had a family, who were all in good health. His diet had usually consisted of fresh meat and bread for his dinner, with tea, and bread and butter, for breakfast, and water-gruel for supper. This was his common food at all times; excepting that he had been used to eat vegetables, which, on account of their high price, he for some months had not been able to procure. Through the preceding long and severe winter, he had mostly worked, together with one other man, in a small garret without a fire-place, where they had sometimes defended them-

themselves from the extreme cold, by means of a pan of charcoal. His companion had suffered no illness.

At the time of his admission into the Hospital, there was no fruit to be had besides oranges, which were very dear, and therefore were not got for him. He had the common diet allowed him, consisting of gruel, potage, &c. together with a small quantity of meat, and twice a week some greens. For medicine he was ordered to take equal parts of a decoction of Peruvian bark and the saline mixture three times a day, besides half a pint of vinegar whey, every morning and evening. Under this treatment, which was never varied, he very soon began to mend: his countenance by degrees put on a healthy appearance; and on the 17th of June he was discharged cured.

As he recovered, he complained of great stiffness in the hams, and of pain at the lower part of the calf of each
2 leg,

leg, but without any perceptible hardness. It might perhaps be partly owing to the manner of his sitting at his business, that during the whole of his illness his legs were never swelled.

Upon making further enquiry concerning a disease so unusual in London, I found that another person had a little before been received into St. George's Hospital, under one of the other physicians to that Charity, with nearly the same symptoms and appearances which have been described. This man likewise had been living in London, and was by trade a shoemaker. And at St. Bartholomew's Hospital, I was informed they had, about the same time, received several poor patients with all the characters of the true Scurvy; which in one man were carried to such a height, that he died in a most offensive state the day after he was taken in.

The severity of the preceding winter, seems to point out the true reason

son of this state of health. For, owing to the uncommon continuance of the frost, vegetables of all sorts were become very scarce, and fuel still more so: which reduced many poor people to the necessity of shutting themselves up, perhaps several together, in a small room, where they could afford to burn little or no fire, and where their best defence against the rigor of the season was, to preclude as much as possible all access to the external air. In this situation they were to provide themselves with nourishment as they could. Vegetables were not to be had; and even meat and bread were unusually dear. We may easily conceive therefore that their diet must have been very indifferent. Nor does it seem unreasonable to suppose that this mode of living, continued for several weeks, may have been fully adequate to produce all the symptoms we have noted. I have been assured by a gentleman, who

who was several years physician to the Mary-le-bone Infirmary, that he had repeated opportunities of observing the same effects produced at other times among the poor of the metropolis by similar causes. And indeed what is at any time the occasion of this disease? For it is now no longer imagined that the sea air is any way necessary to the generation of the sea Scurvy: but wherever people live in a moist and tainted atmosphere, if at the same time they are in want of a sufficient supply of fresh and nutritious aliment, they will always be liable to it.

Two years after the above case had occurred to my observation, I had another opportunity of seeing the same disease, though under a less perfect form.

William Austin, a stout middle-aged man, was seized about Christmas 1796 with rheumatism in his insteps, knees, and wrists, attended with
pain

pain and considerable swelling, but no redness. In the month of February following, he was received into St. George's Hospital, where his pains became less severe; but the swellings, particularly in one wrist, continued with little abatement, and he grew gradually very sallow and weak, and lost his flesh. His appetite was various: sometimes pretty good, at other times very indifferent. His pulse throughout beat nearly 90 times in a minute. By the end of April his weakness had increased to such a degree that he could scarcely walk across the room without fainting; and, after that, actually fell down in the ward several times. At the same time, while lying upon his bed, he said he felt no uneasiness of any kind, except some pain and stiffness in the rheumatic joints. In this state he continued till the 17th of May, when the nurse, who attended him, desired him to shew me some spots, which had for a day or two been
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been observed upon one of his legs. Upon examination I found several irregular large livid spots, about the foot and lower part of the left leg, evidently proceeding from an effusion of blood under the skin. Marks of the same kind, only slighter, were seen upon the other leg also ; and both legs near their upper part were discoloured with a yellow tinge. On looking into his mouth, his gums were observed to have lost their natural healthy appearance, and though they did not bleed spontaneously, yet a very slight cause, such as eating a crust of bread, generally made them bleed. He had for some time been taking a draught of Peruvian bark with vitriolic acid three times a day, and opium at night, but without any sensible benefit. His disorder now put on so much the character of the Scurvy, that I desired he might have six oranges allowed him every day, besides his usual diet, and the same medicines he had taken before.

fore. This course was begun on the 17th of May; and by the 22d he was evidently better: his complexion was become more healthy, and he began to walk with crutches, which he had not been able to do for some time; he also said he had slept for two or three nights much better than usual; but his pulse continued quick, and the blackness of his legs remained unaltered. From the 24th he took only four oranges a day. He continued to mend rapidly, and the colour began to disappear on his legs. Before the end of the month all his scorbutic complaints had left him, excepting only some degree of stiffness in his legs. There was still considerable weakness, and some swelling, in his knees and one wrist, the remains of his rheumatism; and his pulse was quick to the last.

This man had lived for several years as groom, or ostler, in different stables; and for food seemed to have
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used little else than porter and bread and cheese. This had been his constant breakfast and supper, unless when he sometimes got an onion with it; and at dinner he used now and then to get some meat. His diet, while in the Hospital, consisted of gruel, milk, broth, potatoes, bread, and a little meat. It may not be improper to add, that I met with the same man again about two years afterwards, and had the satisfaction to see him perfectly stout and well.

In the month of April 1800, I again observed something of this disorder in one Thomas Rogers, a coachman, naturally of a stout and full habit, about forty years of age. He had been received into St. George's Hospital at the beginning of the preceding January, on account of pains in his feet, which had continued nearly three months previous to his admission into the Hospital. It was three months more before he came under

my care. At that time his principal complaint was an excessive languor and indolence, with which he had been oppressed about three weeks. During the last fortnight his legs had been swelled and hard, but not œdematous, that is, they did not retain the impression of the finger. In different places they were marked with a purple and yellow tinge, particularly the upper part of each: the hams were likewise stiff and hard. His countenance was pale and sallow. His gums, though not subject to bleed, were however so flaccid, that several of his teeth were loose. He was fallen away, and his bowels were disposed to be relaxed: yet his appetite was good, and he slept well. Indeed he complained of scarcely any thing besides a great inactivity and incapability of exerting himself. On the 9th of April he was ordered six oranges every day, and took besides three times a day a draught composed of a decoction of bark

bark with the saline mixture. And, on account of the state of his bowels, a few drops of tincture of opium and a scruple of the confectio aromatica were given at night. Two days after he had begun this plan, namely, on the 11th of April, he said he felt less languid; and by the 14th he had been able to leave his bed for some hours. Both the yellowness and swelling of his legs were also diminished. On the 16th he still continued to mend; and some teeth, which had been loose, were now firmer. But the same evening, by some mistake, he left the Hospital. He told me he had always lived pretty well, usually getting some fresh meat in the course of the day, besides gruel, potatoes, bread and cheese, and porter. While I attended him, his pulse was mostly 84. Not long after I saw him again with little or no complaint.

Was not the Scurvy, in both these instances, produced by long inactive

confinement in the ward of an Hospital with nearly thirty other patients, and at a time of year when it was not easy to prevail upon the attendants to keep the windows open? It is to be observed that it did not shew itself in either case, till the patient had been in the house an unusual length of time.

VIII. *Observations on the internal use of Nitrate of Silver, in certain convulsive Affections.* By RICHARD POWELL, M.D. *Fellow of the Royal College of Physicians, &c. &c.*

Read at the COLLEGE, Feb. 15, 1808.

THE advantages of the modern practice of medicine are, that its indications are more definite, and less complicated, and its means of carrying them into effect more simple than they formerly were. The powers of various substances, endowed with strong sensible properties, have been more carefully investigated, and many of them which had been only known and dreaded as poisons, have been successfully employed as remedies. Among these may be reckoned arsenic, and oxymuriat of mercury ; and it is my present purpose to establish the fact, that another formidable substance, nitrate of silver, may be taken into the human stomach in much larger quantities than analogy would lead us to

suppose, with safety, and in many cases with manifest and superior advantage.

The internal exhibition of this salt, however, is not new. Alston and Gmelin refer to Angelus Sala, a chemical physician, who wrote at the commencement of the seventeenth century, and likewise to Geoffroy and to Boyle, as recommending its use. The following is a sketch of opinions upon this subject as far as I have had opportunity to examine them.

Angelus Sala's process for preparing his *magisterium argenti*, which, as indicative of one of its properties, he also calls *catharticum lunare*, is like all the chemistry of his time unnecessarily operose, but his practical description of the phænomena it presents is correct and judicious. He prepared it by fusion like the *argentum nitratum* of the London Pharmacopœia, and used it as an hydragogue. His dose was from four to eight grains, dissolved

solved in wine; this he gave every third day, and if one dose did not act strongly as a purgative, it was repeated in the course of the day. He observes that this dose might be given *absque stomachi dolore et intestinorum torminibus*; but he afterwards states, that although he had often been extremely fortunate in its use, yet that its safety depends so much upon the accuracy of its preparation, that he had determined not to risk its employment in future.

In Mr. Boyle's collection of remedies is a receipt for what he calls *pilulæ lunares*, which are composed of a mixture of solutions of equal parts of nitrate of silver, and of nitre evaporated to dryness, but not fused, and made with crumb of bread into pills about the size of small peas, of which he states, that one or two taken at bed-time would (where serous humours were present) sometimes work for three or four days moderately, and with-

without debilitating the patient. He mentions no other practical application of the salt to medicine.

Geoffroy's luna hydragoga, vel vitriolum lunæ purgans, was literally Boyle's preparation, but he fixes the dose more definitely to be from three to eight grains, and adds, *commendatur in paralysi, in hydrope ascite.*

In various modern journals there are papers respecting its use, and, in a few instances, it has been given in considerable doses, as four grains thrice in the day. These make no mention of a purgative or other sensible effect supervening. They also, as far as I know, confine its use to epilepsy, a disease to which no remedy is generally applicable, since it arises from a variety of causes, and frequently from such as are beyond control.

Chorea Sancti Viti is another convulsive disease, to certain cases of which I can extend the use of nitrate
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of silver internally. It, like epilepsy, is considerably under the influence of the cause from which it has originated, and this varies in different instances. It may arise from sympathy with various local irritations, especially those of the intestinal canal, or from a particular state of the nervous and muscular systems, unconnected, as far as our powers of examination go, with any organic disease of the affected parts.

Its symptoms are accurately described by Sydenham, by Dr. Hamilton of Edinburgh, and by many others, who seem to me to generalize their indications respecting the causes of the disease farther than my experience will justify.

Dr. Hamilton's opinions are well known, and deservedly respected, and his practice consists chiefly in the free exhibition of cathartics. I mean not to combat the accuracy of his facts, or to doubt the efficacy of his remedies
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in the cases which he has recorded, but to state that either from accidental occurrence, or some peculiarity in the disease, as it occurs in this metropolis, the same practice has not been generally successful; that patients sometimes get worse under its employment, and still receive most decided advantage from metallic tonics, and especially nitrate of silver.

It may be urged that the authors I have quoted employed nitrate of silver as a cathartic, and that upon this operation its effects may depend. I also have occasionally found it to act as such, but by no means generally, and in the cases I am about to select, it did not. In others, where it has shown this tendency, I have checked it by opium and astringents, and the removal of the disease has still followed its use. While therefore I admit that as a cathartic it may sometimes afford relief, I hope to prove that it sometimes cures the disease without

any purgative effect: nor do I consider my experience in this complaint, and the application of its various remedies to be trifling, for I have had at one time within these last six months, no fewer than seven patients affected by it under my care in St. Bartholomew's Hospital, a larger number than Sydenham, according to his own account, had seen during the whole course of his practice; and it is to certain of these cases, as matter of notoriety, that I mean to confine my present observations.

I shall premise a few circumstances with respect to the mode of exhibition of the *argentum nitratum*.

When I first began to administer this medicine, I gave it in the form of pill, but I feared to proceed farther than doses of one grain in a solid form, lest in such a concentrated state it might act as a caustic upon the stomach. I therefore substituted a solution of it in *aqua menthæ viridis*,
which

which seemed best to cover its unpleasant taste, and I conceived that under this form its dose might be increased and its effects ascertained without the chance of danger. The latter form I still prefer, though for different reasons from those which first led me to its adoption; for I have found that the stomach will bear without inconvenience thrice the quantity in the form of pill that it will in solution; and I have been able in some instances to increase the pills to doses of the large quantity of fifteen grains in each, but I have very rarely found stomachs which could bear more than five grains in solution.

The fused nitrate of silver is not entirely soluble in distilled water, and the mode and duration of its fusion is matter of great nicety; it was therefore probable that I might in this way have been deceived in the quantity supposed to have been taken. To form some estimate of this proportion, I pro-

I procured parcels of the preparation from Apothecaries' Hall, and from two different Chemists; of which I dissolved all that was soluble in distilled water, and collected the insoluble residue. This, when washed and dried, was very equal in each, and amounted to about $\frac{1}{100}$ of the salt used; a proportion much smaller than I had expected.

After all, however, it appears to me, that the effects of this substance upon individuals cannot be measured by any general dose, but that the quantity to be given must be regulated by attention to idiosyncrasy, and perhaps also by the disease. I have seen instances, in which adults could not bear doses of only half a grain of it, without consequent pain and inconvenience; and such have chiefly occurred in nervous and hysterical cases; and I shall adduce one case, in which its good effects were consequent upon much smaller doses than those

those given in the subsequent ones. These differences may establish the necessity of a cautious observation of its effects, and of a progressive increase of its quantity.

E. H. a girl of eleven years of age, had a permanent contraction of the flexor muscles of the right arm, by which the hand was drawn to the shoulder. This local affection was not attended by any general derangement of the constitution, and she was admitted into the hospital, December 3d, 1801. Slight electric shocks were first passed along the course of the contracted muscles, by which they were speedily relaxed : but a similar affection of the left leg immediately succeeded. This also yielded to the same application, when the right leg became in turn similarly diseased ; and on passing the shocks along it in like manner, an affection of the head with general convulsion and stupor came on, which lasted for about ten minutes ;

minutes; and on her recovery therefrom, the leg alone remained contracted. Subsequent repetitions of the electricity produced the same series of effects more than once; but as the hazardous affection of the brain occurred in every trial, and nothing but a change of situation was gained by it, the practice was not persevered in. She took without effect sulphate of zinc, precipitated green oxyd of iron, with myrrh, camphor, opium, oil of amber, and animal oil, and used the warm bath and other local applications. Nitrate of silver was lastly given in pills, first of half a grain, then of a grain, three, four, and six times in the day, and from this alone did she receive any benefit. In about three weeks she was perfectly free from contraction; but on quitting the hospital, and discontinuing the medicine, the disease again recurred, and again yielded to the same remedy, which was then however longer continued:
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and when I last saw her, she had remained well for three months. The medicine produced no immediate or sensible effect, but her power of extending the arm gradually increased.

R. N. aged eleven years, a boy of uncommon mental powers, but of a vicious, uncontrollable disposition, was affected with chorea, and had been long under the care of my friend Mr. Anderson. He had taken antispasmodics and metallic tonics, and latterly also arsenic, without effect; when Mr. Anderson, with this information, wished me to try what could be done for him under the restraint and superintendence of the hospital. I admitted him in February, 1806, in the hope that purgative medicines would succeed, and gave him ten grains of the pulvis scammonii cum calomelane, which I repeated every third day with a considerable purgative effect, which was kept up during the intervals by a solution of a drachm and half of magnesia vitrio-

vitriolata every six hours. He was thus actively purged ; but after ten days' trial, all the symptoms were aggravated, and I did not think farther perseverance justifiable. Metallic tonics had been judiciously given ; I had next therefore recourse to digitalis, in doses of half a grain every six hours, and afterwards to half a grain of opium, at the same intervals. The cold bath was also tried ; but every immersion increased the convulsive motions, and the boy grew rapidly worse, until at last the convulsions had become constant even during sleep, and if he was noticed, he could with difficulty be confined to his bed. I directed the argentum nitratum, which had not hitherto been given, in doses of a grain every four hours, and within a week some ground appeared to have been gained. It was therefore increased by gradual additions of half a grain, until he took three grains every four hours, from which quantity the

beneficial effect was so clear that I increased it no farther, and in six weeks from the commencement of its use, he was dismissed cured. I find from subsequent inquiry, that there was no return of the complaint. The medicine was given in solution, and the last increase of it in this form produced slight sickness the first day it was taken, but no other sensible effect followed, although the quantity amounted to eighteen grains in twenty-four hours.

W. B. a boy of fourteen years of age, had previously been my out-patient with this complaint, and had received no benefit from the usual remedies or from active purgatives. I therefore admitted him into the house on August 14, 1806, for the purpose of a regulated trial of *argentum nitratum*. I began with half a grain every four hours, and increased the dose gradually until September 16, when he took four grains in solution every four

four hours. Amendment was visible within a fortnight; but the last increase of dose having occasioned some sickness and pain at the stomach, I diminished it to three grains, in which he persevered without inconvenience. I have no statement respecting any effect upon his bowels, but he remained in the house till the end of October, 1806, on account of an injury to his knee which required the care of the surgeon, and he continued the use of the medicine the whole of that time.

S. S. aged fifteen, a girl of irritable mind, and who had not hitherto menstruated, had been attacked three weeks before her admission with convulsions on the left side only, which she believed to have originated from sudden fright. The disease was growing worse; and on January 8, 1807, was very violent. I gave her an active dose of calomel and jalap, which procured four purgative motions without any particular appearance. She then began the use

of argentum nitratum in solution, first in the dose of one grain every four hours, and on February 4, four grains at the same intervals. Until the last increase of dose she had only one motion daily, after it she had two, for two successive days, but the convulsions had gradually abated; and on February 9, I considered her as free from complaint. She remained, however, under the use of the same medicine for a fortnight longer.

It would be useless to recite more cases of the same sort, but it will give additional weight to the testimony here adduced, if I state that I have the authority of my friend and colleague Dr. Haworth, to mention his success in the administration of the same remedy.

From the whole of the preceding statement, I feel disposed to infer, that we are not to expect from argentum nitratum those violent cathartic effects which the older writers have ascribed to

to it; that chorea, such as it occurs in this town, is by no means generally removable by purgative medicines, though in many cases they may still be obviously proper and effectual; that a remedy not in common use, and which has been considered dangerous, may be given with considerable freedom where the more common instruments of practice fail, and lastly, that this salt seems to produce a more decided effect upon morbid muscular contractions than any of the other metallic tonics. What is its *modus operandi*, what chemical change may be produced in the stomach upon a salt so easily decomposed, and whether the muriat of silver would produce similar effects with less hazard, it is not my present purpose to inquire.

If, after all, this practice shall appear to some to be too bold and hazardous, I would intreat them to recollect the caution observed in its exhibition, and the success which appears
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to have depended upon its employment in some cases of obstinacy and danger. I should be sorry to be misunderstood, or to have it supposed that I am recommending such a medicine to general or very common use; my only object has been to establish certain of its powers, and thereby to add to the number of the instruments by which we may hope successfully to alleviate the miseries of disease.

IX. *On the Mortality of London.* By WILLIAM HEBERDEN, M.D. F.R.S. *Fellow of the Royal College of Physicians, &c.*

Read at the COLLEGE, Feb. 15, 1808.

THE Bills of Mortality in London have often been objected to, as imperfect and erroneous sources of information, and unworthy of credit. And the charge is certainly not without foundation, though by no means to be admitted in its full extent. For, what they want in accuracy, is in great measure supplied by their magnitude, the large scale upon which they are constructed making their smaller errors inconsiderable. Mistakes, which would be very notorious among an hundred, or even a thousand deaths, will often disappear among twenty thousand, which is about the number usually reported in the yearly bills of London. But the surest testimony to their credibility is afforded by the bills themselves, whose agreement with
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each other is quite inexplicable upon any other supposition, than that of their being drawn from the uniformity of nature and truth.

The object to which I propose to call the attention of the Collegē in the present instance, though deduced from the Bills of Mortality, seems however to be free from all the common objections, to which the authority of these registers may be thought liable. For I shall confine my observations to the general returns of the number of christenings and burials, and to the ages at which the deaths are said to have occurred. On these points learning and philosophy could add nothing to the simple testimony of the most ignorant reporters.

Although inquiries of this kind be not immediately connected either with the history, or the cure of diseases, yet if they enable us to form a better judgment of the healthiness of the metropolis, or lead us in any degree to

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the causes by which it may have become more or less salubrious, they cannot be deemed useless, or foreign from the studies we profess. But if they teach us to believe that we are really in a progressive state of improvement, that human life is extended longer, or exposed to fewer calamities than formerly, the conclusion will surely be creditable to ourselves, and gratifying to our fellow-citizens, and flattering to human nature.

One of the most obvious, and most remarkable changes that have taken place in the Bills of Mortality, is the alteration in the relative numbers of the christenings and burials. During the first fifty years of the eighteenth century, the burials exceeded the christenings in the proportion of 3 to 2: during the last fifty years of the same century, the excess of the burials was constantly growing less, and taken on an average they have borne to the christenings a proportion of

of about 5 to 4. But since the year 1800 the burials have actually fallen short of the christenings in the proportion of 12 to 13.

This effect appears to have been produced by the joint operation of an increasing number of baptisms, and a diminished mortality. It will be found upon examination that the principal decrease of burials has taken place among children under two years of age. Probably many more infants may now be put to nurse out of town than were formerly, especially among the parish poor; by which means, if their lives are not saved to the community, at least their burials must often be withdrawn from the London registers. But this alone is insufficient to account for so great a change. I am disposed to believe that the number of deaths in infancy is likewise materially reduced by better care, and more judicious treatment, and a general improvement in our manner of living;

living; so that a greater number of children are actually reared to mature age. The registers of the Foundling Hospital, and of the Lying-in Hospital in Brownlow Street, give great countenance to such an opinion. In the former the proportion of children dying in the first twelve months has decreased since the year 1770 from above one fourth to less than one sixth: in the latter the proportion dying in the first three weeks has in the course of fifty years descended gradually from one in fifteen to one in ninety. And it is not to be supposed that this beneficial alteration has been confined to these institutions. If we reflect on the swathing and diet, the confinement and dirt, in which the children of the poor used till lately to be brought up, we shall cease to be surprised at this effect. For while the luxuries of the higher classes, and the comforts of the middle classes of society, have been so conspicuously increas-

increased, our common Father has not neglected the poorest of his creatures, but has enabled them to enjoy the advantages of warmer lodgings, and cleaner persons, and better clothing, and more wholesome food. And let me, in justice to the memory of one of our own body, recall to your minds, that among the earliest and ablest advocates for the reform which has taken place in the management of children was the late Dr. Cadogan, who published his Essay upon Nursing about the year 1747. But though the principal decrease of burials has certainly been among infants, I shall presently offer some reasons for believing that in the subsequent periods of life also the rate of mortality in London has of late years been diminished.

Many attempts have been made to investigate what proportion of the inhabitants annually die in London. This has been done principally with
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the view of discovering the population, and the probabilities of life; but it has besides been considered as affording the fairest test of the healthiness of the metropolis. Several judicious corrections of the London bills have been pointed out, particularly by Dr. Price*, as necessary previous to drawing any conclusions that can be depended upon. From the result of his calculations it appeared, that in the year 1768 not less than a twenty-first part of the whole number of inhabitants died every year; or, which comes to the same thing, that the annual deaths reported in the Bills of Mortality, augmented by the omissions, which he estimated at 6000, and the sum multiplied by 21, would give nearly the true number of the living. The same author has corroborated his statements by a variety of accounts collected from different parts,

* Observations on Reversionary Payments.

which

which it would be out of place here to detail. I shall content myself with giving in his own words a brief representation of the general result.

“ It may be stated in general, that whereas in great towns the proportion of inhabitants dying annually is from 1 in 19 to 1 in 22 or 23, and in moderate towns from 1 in 24 to 1 in 28; in country parishes and villages, on the contrary, this proportion seldom exceeds 1 in 40 or 50. The proofs of this are numerous and unexceptionable.”

Here then is afforded a rule, by which we may at once form some judgment of the healthiness of any place, if we can only find the proportion which the yearly deaths bear to the whole number of the inhabitants. But we are enabled at this time, with much greater accuracy than ever before, to ascertain this with regard to London. For by the returns made to parliament in consequence
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of the Population Act we are furnished with an actual enumeration of the people in the year 1801; which in those parishes that are included in the Bills of Mortality, amounted to 745,000. The mean number of burials reported at the same time was 19,000. And if to this number we add 6000 for the omissions, agreeably to Dr. Price's estimate (and I know no reason that is likely to have made any material alteration in them since his time) we shall then have 25,000 for the true number of annual deaths; which upon computation will be found to bear to the whole number of inhabitants a proportion little exceeding one to thirty.

If then we adopt Dr. Price's calculations as approaching at all to the truth, we shall see how much the city is advanced in healthiness since the time of their formation. Or if we reject his reasoning altogether, and only compare the present mortality of London

don with that of other great towns, we shall still be led to the conclusion, that London is to be reckoned among the most healthy.

There is yet another point of view, in which I would consider this subject, by comparing the bills with each other, and observing their variation at different periods of life. At the end of the Collection of the Bills of Mortality published in the year 1759 are inserted Tables of Mortality containing a summary of the numbers reported to have died at all ages. These tables I have continued to the present year in the same form, for the convenience of parallel examination : and from thence I find that while the number dying under two years of age is so considerably diminished, as I have already noticed ; the numbers in the two next periods, namely, from two till ten years, are very much increased ; which confirms my former conclusion of their being a greater
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number of children saved in early infancy. For it is obvious that the number of deaths must in general follow the same course as the number of the living amongst whom they occur. Again, between the ages of ten and forty years, very nearly the same proportion died formerly, as now; or where there is any difference, it may be ascribed to the introduction of a greater or smaller number of new settlers, who in that active season are never wanting to supply any deficiency of the natives. In all the subsequent periods of life till fourscore, the numbers at the present time are much greater than they were fifty years ago; and throughout these last fifty years they have been still sensibly increasing; which I impute entirely to the increased healthiness of the town, and the consequent extension of life. The very aspect of the city in every direction will suggest a reason for this in the widening of its

streets, in the removal of nuisances; the opening of confined quarters, the erection of public squares, the construction of better drains, and that universal diffusion of water-pipes, which; like the vessels of a living body, being multiplied by innumerable branches, convey away the impurities of life, and impart new health and animation to every district. It cannot be doubted that much of the poisonous atoms, whatever they be, whose accumulated influence render large communities unfavourable to human life, must be carried off by these open channels for their discharge, or at least softened and blunted by the free admission of a purer atmosphere. It is however remarkable, that the proportion of persons, who attain to the age of eighty years, has never undergone much variation; as if these extraordinary cases were to be attributed rather to some original conformation of the body, some

some greater strength of constitution (for nature observes a certain uniformity even in her irregularities) than to those causes, which influence the preceding course of mortality. The truth however seems to be, that although the proportion who survive fourscore years continues the same that it was fifty years ago, yet the number, out of whom these are supplied, being really much diminished, it follows that the true proportion estimated from among the natives of London, must be in an opposite ratio increased. For upon reflection, it appears that London, under the circumstances of its present diminished importation, is still able to furnish as great a proportion of aged persons, as it did when there was a large addition of inhabitants introduced from the country, after the mortality of childhood was past.

The foregoing observations receive additional confirmation by comparison with country registers of mortality.

For it thence appears that out of every thousand there die in the first five years from the birth, many more in London, than in the country. But from that age till twenty, there die fewer in London; evidently because there are fewer remaining subject to the diseases of childhood. Again, between the ages of twenty and fifty years many more die in London, by reason of the numbers annually introduced from the country. But after fifty, the proportion dying in London is much smaller than in the country, for the reason before mentioned, because the mortality having been accumulated in the preceding periods of life, there are fewer surviving. Now these conditions of the country bills are, in each period, precisely those, towards which the course of mortality in London has been gradually tending. If then in the country they be allowed to result from a greater degree of healthiness, we shall be warranted

ranted in drawing a similar conclusion from the changes which have taken place in the London bills.

It is proper to mention, that in order to obtain the above comparative results, the whole numbers dying were reduced to the same standard of 1000. For the aggregate of the yearly burials in London has suffered such changes, as would have rendered any other manner of computation liable to unavoidable errors. A specimen of this method is exhibited in the following table, in which if the difference of the mortality at different periods appear to be inconsiderable, it must be remembered that the whole is viewed, as it were in a convex mirror, where all the objects are reduced to about one twentieth part of their real dimensions.

A TABLE

X. *Some Observations on Phthisis Pulmonalis.*
By EDWARD ROBERTS, M.D. F.R.S.
Fellow of the Royal College of Physicians,
 &c.

Read at the COLLEGE, April 6, 1810.

THE ordinary symptoms of phthisis pulmonalis are too well known to require a particular description.

The cough, quickened respiration and pulse, with some sensation of debility, are generally the first which are noticed.

But in several instances chronical hoarseness has been observed as the first symptom or precursor of this disease. The cough after an indefinite period, during which it occasionally ceases for a time, at length returning becomes permanent, attended with a more copious expectoration, generally marked with streaks, and sometimes with spots of blood, which seldom appear longer than for a few days, at the commencement of the suppurative process.

cess. The *expectoration*, which is adhering and opake, is usually of the colour of a sage leaf, though frequently of a deeper and bluer cast, but in some cases it appears in firmer masses, and of a yellowish white, more like common pus, issuing probably from larger vomicæ, or being the produce of a more active inflammation. Occasionally after hæmoptysis, and sometimes immediately preceding the fatal termination of the disease, the expectoration becomes of a fawn colour, arising from an uniform tinge of blood.

After this complaint has proceeded for some time, in the ordinary way, a copious hæmorrhage from the lungs, has, in some cases, accelerated the dreaded event. This symptom also sometimes appears on the first attack of the disease, and in a case of this kind a patient coughed up about a pint of unmixed blood, apparently arterial, by repeated efforts, several times,

times, and suddenly sunk into a state of extreme debility and oppression, which she survived only a few weeks. A more protracted, but not less fatal termination sometimes succeeds hæmoptysis. But this is not on all occasions to be considered as an alarming symptom, for it sometimes takes place from lungs not otherwise diseased. It sometimes also occurs without further injury at the termination of fevers, and occasionally as a relief of general or partial plethora, resembling epistaxis in its consequences, and is besides occasionally vicarious of menstruation.

In female patients Amenorrhœa may be almost invariably noticed during the progress of Phthisis Pulmonalis, and the state of pregnancy generally gives a fallacious hope of its removal.

Disease of the liver is known, in some instances, to accompany this complaint, and communication with
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the lungs by ulceration of the diaphragm has preceded the fatal event. In these cases the liver has generally been affected by the abuse of spirituous liquors in persons predisposed to tubercles of the lungs.

It occasionally happens too that patients having lingered for some time under phthisis pulmonalis, are suddenly destroyed by the bursting of a vomica, which is preceded by frequent chills and great irritation, accompanied with increased quickness of pulse, and of respiration.

The presence of the hectic, of which the morning sweat forms the last stage, and which is most profuse on the head and neck, and sometimes confined to these parts, is confirmed by the constant acceleration of the pulse, which seldom beats less than one hundred times in a minute, and is small and sharp. The respiration too becomes more frequent in this stage of the disease, nor does it commonly
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preserve the usual relation to the pulsation of the arteries.

Tubercles, the well known cause of phthisis pulmonalis, are formed in the cellular substance of the lungs, and their origin may be ascribed to the influence of our variable and inclement climate, and the want of attention to guard against its effects by suitable clothing.

This disease is observed frequently to prevail in particular families ; it is thought too to be infectious, but when this has seemed to be the case, that powerful exciting cause, anxiety of mind, has probably co-operated with a strong predisposition to the complaint.

Persons in whom scrophula has shewn itself, and suddenly disappeared, are occasionally the victims of this malady.

The symptoms of irritation which prevail in the incipient stage of this disease, require our earliest attention
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to the removal of the exciting cause ; for it can hardly be supposed that tubercles can be formed without some previous, or attendant indisposition ; and though absorption of them when formed, there is reason to believe, is sometimes accomplished, yet no instance, as far as I know, has been observed of their ulceration being healed.

The proper discharge of the functions of the skin and lungs should be promoted by woollen clothing, and confinement to air of a higher temperature than that of our winters, which is best obtained by residence in a warm climate ; as the air of a heated room is in part decomposed by the support which it gives to ignition. For although air thus vitiated may, in some cases, appear to be more grateful to the lungs, probably from its being less stimulating, as I found phthisical patients relieved by breathing hydrogen, yet under its influence
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the powers of the system languish, and the progress of the disease is accelerated. Heated air thrown into the apartment of the patient is less objectionable, and that parching of the skin arising from exposure to our common fires is avoided, and a more even temperature preserved. Particular attention should be paid to the state of the bowels, and a strict adherence to a milk and vegetable diet enjoined.

In incipient cases these means are more efficacious than repeated blood-lettings, which the constriction of the chest, excited pulse, and increased heat may seem to require: want of power in the system being the cause and concomitant of the disease. If however there be severe pain of the chest, local bleeding and blistering are indicated, to obviate the effects of partial inflammatory action. But if the suppuration of tubercles be apprehended, an issue made by caustic
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is the most powerful mode of counteracting the disease. It should be made in the neighbourhood of the chest, between the shoulders, perhaps as being the least inconvenient place, on each side of the spine, and a purulent discharge should be kept up by the pressure of from six to eighteen peas. In cases where a fixed pain is felt in any part of the chest, a seton may be substituted for the issue. These applications are greatly preferable to perpetual blisters, which produce more irritation, and an unmanageable, and, at best, ill-formed supuration. During the counteraction derived from a regular purulent discharge, the most powerful medicines may be administered with more advantage, such as preparations of iron to the debilitated and chlorotic; cinchona; the various bitters; the sulphuric acid, and the spiritus ætheris nitrici, which, in some cases, has seemed to show peculiar effects in preventing

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ing the suppurative process, as well as the subcarbonate of ammonia; in other instances, digitalis; opium; in fine, whatever means are indicated to lessen irritation, assist the digestion, or excite the powers of the system: under this course too, a more generous diet may, in some cases, be allowed; and the convalescent may afterwards be preserved by the continuance, for some time, of the local discharge without any other aid.

Thus, if the patient be enabled to struggle successfully against the early attacks of this disease, the constitution, in the progress of life, usually settles into a state much less liable to its influence.

The sooner this mode of practice is adopted, the greater, no doubt, will be the probability of its success. For the disease is sometimes so rapid in its progress, and the constitution so overpowered by its violence, that every plan of treatment hitherto pursued
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has failed to arrest its fatal termination.

It is too often to be regretted that patients defer complaining till the time for the successful adoption of active measures is past, and ulceration which might possibly have been prevented, has commenced its destructive ravages. Too well assured of the inefficacy of ordinary means to check the disease when advanced to the state of ulceration, I made trial of various substances which had not, I believe, before been exhibited in this complaint.

These medicines were given in as large doses as the stomach would well bear, and were not hastily discontinued, although none of them showed any specific effects. Emboldened however by the opinions of a late celebrated medical character*, I have
subjoin-

* “ It is to be wished that writers would not confine themselves to relate only their successful practice.

subjoined a list of the articles employed. Among metallic substances the following were given.

Of silver, the only preparation in use, the nitrate.

Of lead, the superacetate combined with opium, which so successfully counteracts its deleterious effects†.

Of zinc the following preparations were directed ; the sulphate and oxide, and the precipitate from the sulphate by potash, combined with myrrh.

Of arsenic, its neutral salt formed by combination with potash.

Of manganese, the white oxide in the dose of ten grains every six hours ;

practice. A physician of experience might write a very useful paper, if he would have the courage to give an account of such methods of cure only as he had found to be ineffectual or hurtful *."

† This preparation of lead had been used before under the form of tincture, but uncombined with opium, and professedly with the sole view of restraining the night sweats.

* Medical Transactions, vol. i. preface.

and the black oxide of cobalt, in the dose of from one grain to four.

Ammoniated copper, muriate of barytes, the nitric and phosphoric acids ; the vegetable narcotics, aconite, hyoscyamus, stramonium, belladonna, as well as toxicodendron were administered without success.

SUPPLEMENT.

To the preceding observations, I beg to add, that I have lately attended two cases of continued fever, without any previous or accompanying affection of the lungs, which terminated, after some weeks duration, in Phthisis Pulmonalis, the hectic taking place when the symptoms of the continued fever were going off. And I may observe, that during the progress of Phthisis Pulmonalis, symptoms of various internal disorders frequently appear, so as, on a casual view, to divert the attention from the principal complaint; and that phthisical patients often seem to sink under a general break-up of the constitution.

The following case of a different form of this disease, has also lately
occur-

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occurred to me. The subject of it was a young man twenty-five years of age, previously of good general health, well-formed, and of a sanguine temperament: he had for the last two or three years been frequently attacked with pain in the chest, accompanied with a sense of a load or weight, great difficulty of breathing, a hoarse cough attended with expectoration, increased heat, and a quick and strong pulse, with so inordinate an action of the heart, that it was supposed extensive disease of the organs of the chest, and probably adhesions of membranous parts, had taken place. After having suffered from frequent attacks of this kind, during which he obtained relief from bleeding, blisters, and relaxing medicines, he at length sunk into a confirmed state of disease; his breathing became permanently difficult, his pulse accelerated, and often attended with a painful action of the heart, a copious expectoration, occasionally streaked with blood, profuse perspirations,

TRANSACTIONS.

tions, diminished appetite and strength; with gradual emaciation, till he died.

On inspection of the body by Mr. Lawrence, it appeared that "the heart was perfectly healthy, the lungs were quite natural to external appearance and feeling, but a great quantity of frothy fluid escaped from all parts on cutting into them. The mucous lining of the trachea, and of its ramifications in the lungs, was inflamed, the former slightly, the latter more considerably. The abdominal viscera were healthy."

It appears, as far as I am able to judge, that phthisis trachealis, of which this was a case, differs from phthisis tubercularis, in the greater irregularity of its symptoms; and that although the sweating is often profuse in this form of disease, yet the whole stage of fever is less uniform in its characters and recurrence, and the expectoration has not the pale green colour, so frequently

quently found in that arising from tubercular consumption, nor is it, unless towards the termination of the complaint, so copious.

XI. *Observations upon the comparative Prevalence of Insanity, at different Periods.* By RICHARD POWELL, M.D. *Fellow of the Royal College of Physicians, &c.*

Read at the COLLEGE, April 13, 1810.

THOUGH the imperfections of the Bills of Mortality are notorious and acknowledged, they have been held to afford upon a wide and extensive scale sufficient grounds upon which the comparative prevalence and fatality of different diseases in London may be estimated. In the present paper I propose to submit to the College an abstract of some other documents, to which, as well as to the Bills of Mortality, various inaccuracies are attached. These documents, like the Bills of Mortality, have now accumulated through such a number of years, under objections applying equally to all, as apparently to admit of some general and safe deductions on the subject to which they

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severally

severally allude. The abstract from them relates to the comparative prevalence of insanity at different periods, and is drawn from the registers kept according to the directions of the act of parliament for regulating mad-houses, (14 Geo. III. cap. 49.) ' I first undertook the examination of these registers for the purpose of trying how far the relative numbers contained in them would support the popular opinion respecting the rapid increase of that most difficult, delicate, and important disease, and also of trying whether any analogy or connection could be established upon more solid grounds, between the number of insane persons and the political circumstances of the times, or any known variations in the seasons of different years.

It may be proper in the first place, to notice generally those provisions of the act under which the register is kept, on which these statements are founded,

founded, and in the next place to explain some of the chief causes of the inaccuracies to which any conclusions deduced from them must of necessity be subject.

The attention of the Honourable the House of Commons was first called to the subject of private Lunatic Houses on January 27th, 1763, (Journ. Vol. 29, p. 413,) when a Committee was appointed, and their report was made February 22d, 1763. It will be found in their Journals, Vol. 29, p. 486, and details the existence of certain abuses in the management of such houses, and in consequence thereof a bill was ordered; but not then brought in. A bill was ordered a second time, April 29th, 1772, (Journ. Vol. 33, p. 712,) but not brought in. A bill was ordered a third time, February 11th, 1773, and in the year 1774 passed into the present act of parliament, which is entitled, An Act to regulate Mad-houses

houses (14 Geo. III. cap. 49). The provisions of this act were first established for a limited period of five years. In the year 1779 (19 Geo. III. cap. 15.) the act was further continued for seven years, and in the year 1786 (26 Geo. III. cap. 91.) it was ultimately made perpetual. A power is hereby vested in certain commissioners to license and visit all houses in England and Wales, in which more than a single lunatic shall be found to be confined at any one time. The houses in the city of London, and within seven miles of it, and those in the county of Middlesex, are placed under the superintendence of five commissioners, to be chosen annually by the College of Physicians of London. The houses in the other parts of the kingdom are under the direction of the general quarter-sessions of the respective counties as to licensing, and under two magistrates, conjoined with a physician, duly appointed

pointed at such quarter-sessions as to visitation. The keepers of all licensed houses throughout the kingdom are directed, under a penalty of 100*l.* for each omission, to return the name of every insane person * received therein, together with the names and residences of the relations or friends by whose authority and direction, and of the physician, surgeon, or apothecary, under whose certificate and advice, such person is placed in confinement, to the secretary to the commissioners in London: they are also directed to send this notice within three days after the reception of a lunatic into any licensed house in London or Westminster, or within seven miles thereof, or in the county of Middlesex; and within fourteen days after such reception into any licensed house in any other county of England and Wales.

* There are still some few persons remaining in lunatic houses who were in confinement therein before the act was passed.

The secretary is directed to enter these several circumstances in a register, which he is to keep for that specific purpose.

This register has been established from the operative commencement of the act, from the year 1775 inclusive, and has now been kept through a period of thirty-five years. Since September 30, 1808, it has officially been under my own charge, as secretary to the commissioners; and I have from these records made my computation of the proportionate numbers which form the basis of this communication.

In order to form a correct judgment respecting the increase or decrease of any particular disease, it is not sufficient merely to ascertain the number of cases in which it occurs within any given period or periods, but it is further necessary to examine the relative population of the country at exactly the same times, and to

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compare

compare under the same dates the numbers of each. Now upon this subject our data are very deficient. The census of the year 1800 is indeed one fixed point of considerable importance; but before that time we have none formed upon the same principles, or approaching to the same degree of accuracy, inasmuch as all the previous estimates of population were taken from the number of houses returned to the tax-office. When moreover the question of population has been brought under particular discussion, this chasm or deficiency of fact has been often filled up by conjecture alone, according to the particular views of individuals, so that some writers have affirmed the population to be on the increase, while others have held the contrary opinion. With respect to the period now under consideration, we may observe that the destruction occasioned by an almost
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uninterrupted state of war, and the extensive substitution of machinery for workmen in so many of our manufactories, might be thought feasible reasons, among others, to induce the belief that no considerable increase had actually taken place ; but on the other hand the absence, during the same period, of any general or destructive disease of a contagious nature, would perhaps be sufficient to counterbalance the first of these opinions, whilst the advance of trade, and the introduction of many new branches of manufacture might be said to have continued probably to afford employment for at least as many persons as formerly, notwithstanding the improvement in machinery. The facts also which present themselves to the observation of the traveller, whatever direction he may take through this country, and all the local information which we receive upon the subject, supply us, as I am
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led to think, with sufficient proof, that the increase must actually have been very considerable, though we cannot ascertain what has been its exact proportion.

Insanity appears also to have been considerably upon the increase; for if we compare the sums of two distant lustra, the one beginning with 1775, and the other ending with 1809, the proportion of patients returned as having been received into lunatic houses during the latter period, is to that of the former nearly as 129 to 100. But it may be satisfactory here to notice, that the actual numbers of persons labouring under this dreadful disease fall much below the ordinary estimates of its prevalence, and that in fact, with all the predisposition to it, with which the inhabitants of this commercial country have been supposed to abound, it ought not to be considered as a complaint of very common occurrence; for

for assuming, even for argument's sake, that paupers and those received into public hospitals, together with those neglected to be returned, bear to patients actually returned, according to the directions of the act, the proportion of 3 to 2, (which is rating their numbers higher in my conception than we ought) still the aggregate number of insane persons of the year 1800, will only be, when contrasted with the census of England for that year, in about the ratio of 1 to 7300 *.

But I have stated that these registers are subject to numerous inaccuracies, and that any deductions which may be made from them must be imperfect, and it may therefore be useful in the next place to enumerate

* It is remarkable that no returns have ever been made from any part of the principality of Wales, from which circumstance, and from some enquiries upon the subject, I believe that there is no lunatic house in that part of the kingdom.

some of the causes, on the operation of which these inaccuracies may possibly depend.

The act of parliament not only omits to give directions that insane persons, who are parish paupers, shall be reported when admitted into lunatic houses, but it expressly exempts such patients from any return at all. In some establishments these bear a very large proportion to the whole number confined, and in one instance they form rather more than three fourths of the total number of a very large one. Other houses on the contrary receive no patients at so low a price as that contracted for by parishes for the relief and support of their paupers visited by this deplorable calamity. One is at a loss to discover what possible motives or reasons could have influenced the Legislature when it made this exception; for would it not rather seem that those, who, while they suffer the miseries and incapacities of insanity,

sanity, are also destitute of friends interested in their restoration, welfare, or comforts, must stand in especial need of protection? The evils of this defect in the act are however only nominal, and practically extend no further than the omission of returns for insertion in the register, for the London commissioners in their visitations do most scrupulously examine the situation, and attend minutely to the personal and domestic comforts of the inmates of these extensive establishments; and I should feel myself wanting in justice to them, was I not to mention this fact with due emphasis, inasmuch as it has been erroneously or inadvertently stated in the report from the Select Committee of the House of Commons, appointed to investigate the state of pauper and criminal lunatics in 1807, that the inspecting commissioners do not consider themselves as required to examine into the situation of parish paupers.

pers. Now, it often happens that, contrary to the exception thus made by the act, paupers are returned to the secretary by the keepers on their reception into licensed houses, while no mention is made in that return of their belonging to this particular class of patients, and their names are consequently inserted in the register. On this ground therefore some deduction (although not a large one) ought to be carried into the account for unnecessary returns, from the collective amount of those whose confinement the act professes to ascertain.

Again, no returns are required to be made of those persons whose insanity is established under a commission of lunacy, and who are confined in consequence thereof, but they are nevertheless not unfrequently made. It is however hardly necessary to notice this fact among the causes of inaccuracy in numbers, since its operation is exceedingly limited, for it very generally

nerally happens that the antecedent confinement of such patients has been of some duration, and that the probable chances of a speedy restoration have passed by before such a step has been ultimately adopted by their friends, or application has been made for a commission, and therefore, from their prior and first admission into a lunatic house, these are in reality returned, and appear accordingly as such in the register.

The act likewise exempts *public hospitals* from the jurisdiction of the commissioners; but of the patients admitted into the two great public lunatic hospitals in this metropolis, many are previously received into some licensed house, where they are kept in waiting till their turn for admission arrives; these then are by consequence reported, and in common with others inserted in the register, although they may remain in such houses for a very short time, and that too for a particular

cular purpose, which goes afterwards to exclude them from the tangible operation of the act itself. Under this head I wish further to observe, that the words *public hospitals* are of very indefinite import, and that the scope and intention of the Legislature is very equivocally and defectively expressed by them. There are institutions, which shelter themselves under this name, and which take no licence, and make no return of the patients admitted into them, although they receive payment for medical attendance, custody, and accommodation, and often at as high a rate as that of the licensed houses. In this manner more lunatics are probably excluded from the register, according to the purview of the act, than are otherwise added to it in consequence of the unnecessary returns of paupers, or of persons actually confined under commissions of lunacy.

The notorious propensity which
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mankind has to change its medical advisers, and to seek benefit from a multitude of successive extempore opinions, rather than trust, with patient confidence, to the more certain though perhaps slower system of any individual, extends itself also, in no small degree, to lunatic houses: and hence patients are often, without any good ground or reason, capriciously shifted from one house to another. Now these are necessarily reported in the character of new patients received into each, and are accordingly entered in the register as such. This practice of course makes the apparent numbers of insane persons greater than the actual numbers, and it is not possible, under the present circumstances, to rectify the errors arising from it with any satisfactory degree of precision, inasmuch as similarity of name cannot safely be assumed as sufficient to establish identity of person.

A recurrence of the disease in the
same

same individual is a predominant characteristic of insanity, and produces a similar inaccuracy in numbers, which like the former cannot be provided against. Though the patients may be considered as constituting a very numerous body, who, under the management of lunatic establishments, are restored to their reason, and return to their former occupations and station in society; yet of these, however, by much the greater portion is afterwards liable to relapses, and is at repeated intervals thus placed in a fresh confinement, so that in this way again one individual often becomes successively the subject of many different and reiterated entries in the register, and sometimes even in the same year. This is indeed almost uniformly the case, and it is for example more especially so where insanity has been induced by an abusive indulgence in spirituous liquors. One instance has fallen under my own notice,

in which a female in a respectable situation of life, within less than five years, has been liberated eight times from confinement. The necessity for such repeated restraint has originated from a want of resolution to resist her acquired habit of taking spirits; so weak indeed have been her efforts, and so short-lived her determinations, that I have seen her in a state of intoxication within twenty-four hours after her return home from a mad-house.

In our estimate of the prevalence of insanity, some addition also beyond the numbers which the registers supply, must be made for those unfortunate individuals possessed of more ample fortunes, who are confined in single houses, either under the care of medical practitioners, or more frequently under the superintendence of keepers of licensed houses, or in short of any description of persons, under the evasive salvo of a plea, that where one lunatic only is confined in one house,

house, he and his household are wholly exempted from the provisions of the act. Under the improvident vagueness of diction in this act, it is thus judged to be lawful for any one to consign to solitary confinement patients to any numerical extent whatsoever, even in contiguous houses, provided they be distinct, without legislative control or interference of any kind. Such patients therefore are not supposed to come in any shape under the direction or examination of the commissioners, nor are they reported for insertion in the register; and I have reason to believe that within the last few years this practice has not only not diminished, but has considerably increased.

The observations which have hitherto been made, apply to the returns from houses generally, but there are many reasons to induce me to suppose that the sources of inaccuracy are largely multiplied in those made
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from the other districts of England, which are out of the jurisdiction and personal scrutiny of the London commissioners.

The visitors of houses in the several counties may, under the act, if they think it necessary, make or cause to be made minutes of any observations, &c. occurring during their visitations, which are to be entered in a register by the clerk of the peace, and copies thereof are to be sent from time to time to the secretary to the London commissioners, and to be entered by him in a separate register appropriated to that purpose. These returns are in fact made without any thing like regularity, excepting in a very few cases, and there are many counties in which licensed houses are to be found from whence no reports at all have been officially received, at least within my own knowledge; but when such reports have been transmitted they have proved of great consequence, because
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as they usually contain a list of the patients in confinement, on collation with the register, they thus tend to supply the only check which now exists upon the inaccuracy of the various returns respecting the admissions previously made by the respective keepers of the houses thus visited. Several recent instances might be quoted to verify the presumption that the provisions of the act are not sufficiently attended to in many provincial situations, notwithstanding the serious penalties attached to defaulters. In some counties licensed houses are known to exist, and to hold in confinement no small number of patients, the keepers of which do not even trouble themselves so far as to make any returns of the patients they receive, and in others there are houses which actually receive patients without any license, or attention to any of the other mandates of the act. Considering, therefore, the proportional
numbers

numbers locally reported from the counties as less accurate than those from the London district, I have distinguished the two in one of the subsequent tables, to afford the means of readily separating documents which practically appear to me to be of such unequal authority.

If then we make every reasonable deduction from, and addition to the numbers exhibited by the register, and consider that all the causes of error here enumerated, with perhaps many others, have operated from the commencement, and through the lapse of each successive year, it may, I humbly conceive, upon the whole, be fairly presumed that the annexed tables, deduced from and constructed upon the register, afford pretty nearly as accurate and general an estimate of the relative prevalence of insanity during the period they include, as (all circumstances weighed) the case will admit.

In the ingenious and excellent observations upon insanity, published by my friend Mr. Haslam, there is a statement drawn, from the admissions into Bethlem Hospital from 1748 to 1794, of the proportion which the male and female patients have borne to each other; from which it appears, that the ratio of the former has been to the latter nearly as 1000 to 1195. The London register was examined with a view to this point for five years, from 1804 to 1808, and it has yielded me a different result; for according to it, the male patients have on the contrary been, in respect to the females, nearly as 1128 to 1000. I can readily admit that the books of one regulated and well-appointed establishment, like that of Bethlem Hospital, will afford much surer grounds for a general induction of this sort than the careless returns which are made from a number of private houses, in which the initial only of the Christian

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tian name is given, and consequently the sex of the patient is not to be ascertained. But perhaps the difference in these results may be in part accounted for upon other grounds, especially, upon the presumption that as you advance into the higher classes of society, the reluctance will become greater to placing a female than a male in a strange house of confinement, whilst it may be concluded that such considerations very slightly affect that class of patients who apply for admission into a public hospital.

Any other practical defects or imperfections that may exist in the act for regulating mad-houses fall not within the limits or design of my present communication. The act, such as it is, has proved altogether a source of incalculable benefit to the objects of its care and protection, since it has removed a large portion of those evils which appear to have existed previous to its commencement. Yet it is not

the less surprising that the plenitude of experience, during a period of thirty-five years, has not hitherto led to some further practical revisions and reforms; and if public attention were properly directed to the subject, the present system would surely admit of much useful improvement, and the experience already acquired might doubtless be most advantageously extended under the modifications which local circumstances must require, to the other parts of the United Kingdom*.

* I may be permitted to add, that since this paper was read I have seen with much satisfaction a publication entitled *Observations on the Structure of Hospitals for the Treatment of Lunatics, and on the establishment of a Lunatic Asylum at Edinburgh*, 1809, and that the recent census of 1810 having confirmed the suggestions on the relative population of the country, has now rendered them in reality unnecessary. I do not however imagine that any omission or alteration in the original communication would be altogether justifiable or proper.

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Of the subjoined tables the first is numerical, exhibiting the arithmetical amount of persons received into the respective houses within the London district, and into those of the several counties of England in each year from 1775, and the aggregate sums of the seven distinct periods or lustra into which that portion of time may be artificially divided.

The second is a chart to demonstrate at one view the relative proportions of each successive year, from which a judgment may be more readily formed than from the gradual review of a series of figures. It is constructed upon the same principles as chronological charts, and I was led to adopt it as well calculated to exhibit the progression of diseases, from a work published by Mr. Playfair, and entitled *A Commercial and Political Atlas*, in which it is applied to finance. Each line which passes horizontally

horizontally from left to right expresses ten in number from 50 to 600. The spaces as they are divided perpendicularly, give the numbers received in the respective years marked at the top of the column. The interior *blue* space expresses the numbers returned as received in houses in the counties of England generally, exclusive of the London district; the second *red* space gives the numbers returned as received into houses in the London district, and the upper *yellow* one the aggregate of both. The chart commences from 50, which is lower than the lowest number required.

The third is also a chart designed to exhibit the proportions of longer periods than single years, and may perhaps therefore tend to give a better general view of the comparative prevalence of insanity. The whole period since the commencement of the operation of the act is now divisible into seven quinquennial

quennial periods or lustra, and under similar columns to the former, the aggregate number received in each lustrum is expressed in the perpendicular columns by lines, the value and amount of which is given in the first column.

*Number of Lunatics returned under the Act
14 GEO. III. and entered in the Registers.*

Year.	London Numbers.	Total of each Lustrum.	Country Number.	Total of each Lustrum.	Aggregate of each Lustrum.
1775	253	} 1194	153	} 569	1783
1776	217		120		
1777	245		116		
1778	238		113		
1779	241		87		
1780	258	} 1357	108	} 536	1893
1781	252		128		
1782	240		109		
1783	311		91		
1784	296		100		
1785	299	} 1365	115	} 527	1892
1786	253		110		
1787	270		91		
1788	257		102		
1789	286		109		
1790	283	} 1573	148	} 719	2292
1791	283		123		
1792	354		137		
1793	331		166		
1794	322		145		
1795	344	} 1622	110	} 620	2242
1796	305		141		
1797	342		115		
1798	303		130		
1799	328		124		
1800	339	} 1835	138	} 628	2463
1801	368		122		
1802	441		149		
1803	363		108		
1804	324		111		
1805	313	} 1502	110	} 769	2271
1806	293		150		
1807	276		138		
1808	284		170		
1809	336		201		

The first part of the year		The second part of the year	
1701	1702	1703	1704
1705	1706	1707	1708
1709	1710	1711	1712
1713	1714	1715	1716
1717	1718	1719	1720
1721	1722	1723	1724
1725	1726	1727	1728
1729	1730	1731	1732
1733	1734	1735	1736
1737	1738	1739	1740
1741	1742	1743	1744
1745	1746	1747	1748
1749	1750	1751	1752
1753	1754	1755	1756
1757	1758	1759	1760
1761	1762	1763	1764
1765	1766	1767	1768
1769	1770	1771	1772
1773	1774	1775	1776
1777	1778	1779	1780
1781	1782	1783	1784
1785	1786	1787	1788
1789	1790	1791	1792
1793	1794	1795	1796
1797	1798	1799	1800

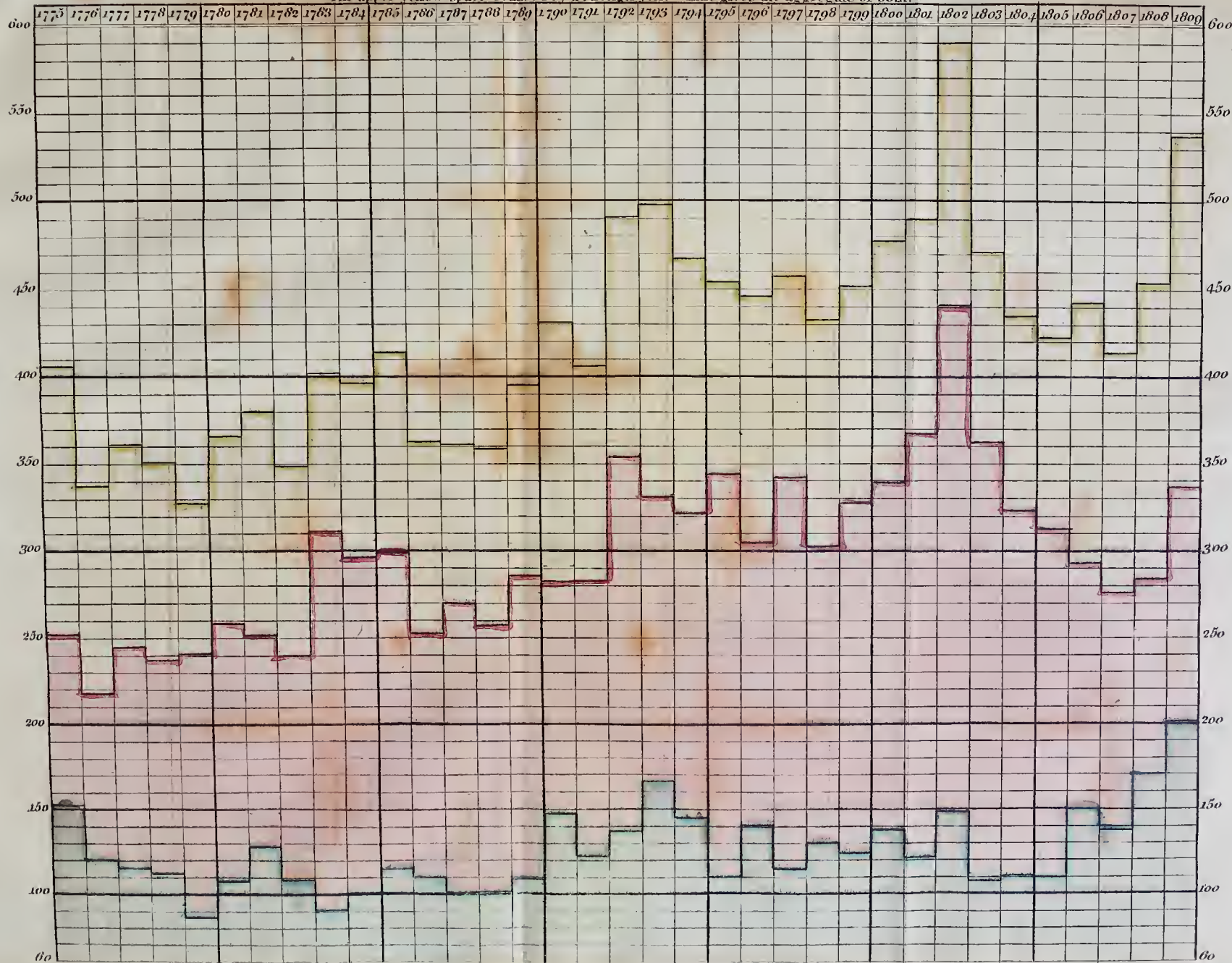
(Chart)

Exhibiting the Number of Lunatics returned under the Act 15 Geo III (Cap 29) in each Year from 1775 to 1809.

The lower blue division bounded by a stronger blue line gives the number received into Houses in the several Counties of England

The second red space bounded by a stronger red line gives the number received into Houses in the London District

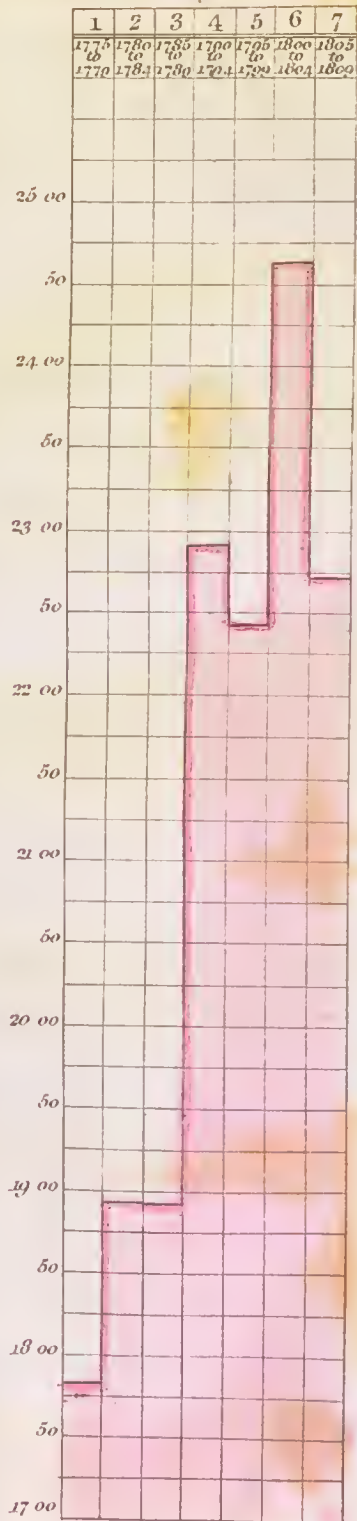
The upper yellow space bounded by a stronger yellow line gives the aggregate of both.





(Chart)

(Exhibiting the whole Number of Lunatics returned under the Act both from the London & Country Districts for seven successive Years.)





XII. *Case of Superfœtation, communicated by WILLIAM GEORGE MATON, M. D. F. R. S. Fellow of the Royal College of Physicians, and Physician Extraordinary to the Queen, &c.*

Read at the COLLEGE, December 11, 1810.

MRS. T. (an Italian lady) was delivered of two male children, at Palermo, on the 2nd of June 1806; one of these children lived about two years, and the other three years, and are supposed to have died more from want of care than from any other cause.

On the 12th of November 1807, she had another male child, who was brought forth under circumstances very distressing to the parents, being dropt on a bundle of straw, at midnight, in an uninhabited room. Though this infant had every appearance of health, at the time of his birth, he lived about nine days only.

But the occurrence which forms the

more immediate object of this paper is now to be related. On the 2nd of February 1808, (not quite three calendar months from the preceding *accouchement*) Mrs. T. was delivered of another male infant, completely formed, and apparently in perfect health. He was sent away to be nursed, but the nurse's milk being deficient, he was removed soon afterwards to another foster-mother. When about three months old, however, he fell a victim to the measles, and died. From November 1807 to February 1808, Mrs. T. had not left Palermo, except on short excursions in her own carriage; and Mr. T. the lady's husband, (who is in the commissariat department of the British army,) has been constantly with his wife since the year 1805. The prolific character of Mrs. T's. constitution is, perhaps, almost unprecedented, for, on the 23d of November 1808, she again had twins (males) who are both alive, and

and in good health, at Palermo. On the 9th of June 1809, Mrs. T. miscarried, on board of the ship which brought her to England, and which was preparing to engage some cruisers. She is pregnant at this period.

I learn that Mrs. T. is of so robust a habit, that she pays scarcely any attention to her health. She was carried from the room where she was delivered of the child, in February 1808, to her own apartment, in the arms of her husband, and in two or three days afterwards walked about the house.

In a certificate which Mr. T. was so obliging as to send to me, he solemnly pledges his word to the correctness of the above statement, except so far as relates to the *precise* time which the several children lived, and which may have been a few days longer, or shorter, than the periods which have been mentioned. The circumstances

were first made known to me by Mr. James Thomson, surgeon, of Tavistock Place, Russell Square, who had the goodness to acquaint his friend, the husband of the lady, with my wish to communicate them to the Royal College of Physicians. That there might be no mistake, the latter gentleman then committed them to paper, attested by his signature, which he politely put into my possession.

I shall not attempt to connect the case which I have described, with any opinions respecting the process of generation, but content myself with opposing it to the scepticism of some modern physiologists, who appear to me to discountenance all belief in the occurrence of superfœtation, more from partiality to a favourite hypothesis, than from any clear notions, as yet established, of the mode in which impregnation takes place.

The case of superfœtation related
by

by Harvey (*de partu Exercit.* p. 547), with regard to the time that intervened between the two births, is the same as Mrs. T's.

October 18th, 1810.

XIII. *A Case of Tetanus arising from a Wound, in which the Affusion of cold Water was successfully employed.* By GEORGE GILBERT CURREY, M.D. Fellow of the Royal College of Physicians, &c.

Read at the COLLEGE, December 19, 1810.

As there are but few cases on record of Tetanus, arising from wounds, in which the affusion of cold water has been successfully used, I have been induced to lay the following case before the College.

John Buchanan, a labourer on the estate of the Earl of Besborough, at Roehampton, about forty years of age, on the sixth of September last, had his left hand jammed against a brick wall, by the falling of a large stone, which he was assisting in moving. The back of the hand was cut, the palm of the hand, and the little finger were very much lacerated.

On the 13th he was admitted into St. Thomas's Hospital under the care of Mr. Cline.

On

On Saturday the 22d I was desired to see him. He was sitting up, and then told me, that on the preceding Wednesday, he first felt unwell, with some uneasiness about the neck, and stiffness of the jaw, and some difficulty in swallowing. He had at this time evident symptoms of approaching tetanus: as the complaint however had made but little progress, he was ordered only thirty drops of tincture of opium every six hours in the camphor mixture, and the cold affusion was directed to be used should any decided increase of the disease take place. During Sunday, Monday, and Tuesday, the complaint made slow, but gradual advances; and on Wednesday the 26th his jaw was more closely locked, he swallowed with more difficulty, he had frequent spasms, and the muscles of his abdomen were rigidly contracted, particularly towards the right side; but neither at this time nor during any part of his illness, did he complain

complain of that distressing pain, so usual in tetanus, under the ensiform cartilage. I may here observe, that in the progress of his complaint, the sudden approach of any person towards his bedside always brought on and increased the spasms: that he suffered from stiffness and cramps in his thighs and legs, and that he had frequent and profuse perspirations.

At twelve o'clock on Wednesday the 26th he was assisted out of bed, stripped naked, placed in a chair, and two pails full of water of the temperature of 62° were thrown over him, from which he expressed himself considerably relieved.

To avoid the unnecessary length to which the notes, which were daily taken, would extend, I shall content myself with stating, that the cold affusion was used for twelve successive days, viz. from the 26th of September to the 7th of October inclusive: that during the first eight days, it
was

was used every four hours, with the exception of Saturday the 29th; at eight o'clock in the morning, when it was omitted by the attendants, in consequence of very severe general spasms having come on (whilst the water was poured over him) at twelve o'clock the preceding night, and four in the morning, so that he was with difficulty held in the chair: afterwards it was regularly repeated. On Thursday the 4th of October, it was used in the morning, and repeated three times during that day. On the following day he submitted to the affusion three times (at half past nine, A. M. at three and nine, P. M.) and only once in each of the two succeeding days. During this time he took thirty drops of tincture of opium, every four hours. On Monday the 1st of October he was allowed a pint of porter, and on Tuesday ordered to take a pint of port wine, in the twenty-four hours. He uniformly expressed

5

pressed considerable and immediate benefit from the cold affusion, described his spasms as relieved, that he felt them perceptibly increase about three hours after the use of the cold water, which never failed to mitigate them for the time *.

The result was, that on the 8th of October he could open his mouth better : that his abdomen became softer, and though on my first touching it, a very great hardness was felt, yet after my hand had been on it for a few seconds, he could bear considerable pressure without the muscles at all contracting.

The affusion was discontinued after the 7th of October. The opium was given every four hours for a day longer, and afterwards every six hours : and at night sixty drops of the tinc-

* There was one exception. He did not express any feeling of benefit from the affusion, when used at nine o'clock P. M. on the 5th of October.

ture of opium were taken, in consequence of his complaining that he was restless during the first part of the night. On the 13th of October, the opium was omitted, except forty drops of the tincture at night, the wine was reduced to half a pint in the twenty-four hours, and altogether left off on the 22d.

His bowels required the frequent use of injections and laxative medicines till the 24th.

From the time of the discontinuance of the affusion, his amendment was a little variable, but progressive: so that on the 19th of October he was able to sit up, and in a day or two to walk about the ward without assistance. The muscles of the neck and abdomen were occasionally stiff, and contracted for some days after he was able to walk about. On the 3d of November he was however nearly free from every remains of illness, and on the 6th walked several miles,

miles, and he is now perfectly recovered.

The application to his hand was at first simply linseed meal poultice. After the first week, at my request, Mr. Cline desired that the wounds might be washed with tincture of opium, and that the same tincture might be poured on the poultice ; but his hand gave him very little uneasiness. He has lost the two first phalanges of the little finger, the end of which has now cicatrised. His third and middle fingers are, in consequence of the injury, I fear permanently contracted towards the palm of the hand.

It remains only that I should notice the state of the pulse. The first day I saw him it was not noted. The day after it was 66, and on the two following days the number of pulsations were from 78 to 98. Three hours after the cold affusion was had recourse to for the first time, his pulse
was

was 106. During its use it varied from 72 to 95 pulsations in a minute. Afterwards the greatest number of pulsations was 87, but they were very generally near the natural standard.

XIV. *Sequel to the Paper on Tetanus.* By J. LATHAM, M. D. F. R. S. *Fellow of the Royal College of Physicians, &c.*

Read at the COLLEGE, Sept. 29, 1812.

THE strong analogy which is observable between Tetanus and Hydrophobia, induces me to trouble the College with a few remarks, which may not perhaps seem out of place, should the Committee deem this Paper worthy to be inserted in the annals, as a Sequel to that which they have done me the honour to receive on Tetanus.

My experience in hydrophobia is certainly very limited, having as yet seen only two cases of it; but it has been sufficient, even without the concurrent testimony derived from the experience of many others, who have by no means been superficial observers, to convince me of the fact that there is a very great resemblance between tetanus and hydrophobia. The uncertain period of time after the wound has been inflicted before these

diseases supervene, the general absence of suspicion in the patient respecting the wound as a cause, the regular healing of the wound, the freedom from restlessness or other febrile symptoms until the disease has approached, the little derangement of system during the intervals of the first spasms, and the dreadful increase which is so soon too frequently to be observed in them, all mark such a similarity between the two diseases as to authorize me (since all medicinal means hitherto tried in hydrophobia have been unsuccessful) in pressing most strongly the same sort of treatment in hydrophobia which I have recommended as having sometimes succeeded in tetanus. As it is obvious that the administration of medicines by the mouth must very soon become impracticable, the method by enema should vigorously be followed; as soon then as the compound powder of Ipecacuanha (the medicine I have more particularly noticed)

ticed) is swallowed with inconvenience, a drachm of it may be given every two hours by injection.

I confine myself merely to this recommendation of a method of treatment, without entering into the consideration of the nature and symptoms of the disease itself: this has already been done so fully and so ably by Hamilton, Bardsley, Gillman, and others, that I deem it unnecessary to enlarge upon it: neither can I pretend to add any thing to what has been recommended respecting the immediate treatment of the wound inflicted by the bite of the rabid animal, it being agreed that the direct removal of the part bitten, is the best method for preventing the dreadful consequences that otherwise are very likely to ensue: washing the wound repeatedly with either warm or cold water until surgical assistance can be procured, should never be omitted, and when excision of the part is practicable,

ticable, it ought not to be delayed; and if the surgeon has any doubt whether he may have perfectly cut away the bitten part, the cautery either potential or actual should be also employed.

When I say that the part bitten should be removed as soon as possible, it is on the supposition that the dog inflicting the wound was really mad: the animal, if actually rabid, lives but a few days; and, therefore, in doubtful cases, it is proper to wait for its death, and its subsequent examination before the surgeon determines upon any painful operation: for if the stomach of the animal be found to contain matters not usually found there, such as straw, paper, bits of wood, hair, cork, &c. there can be but little doubt that the dog died mad; and if superadded to this, appearances of inflammation with livid and mortified spots should be observed, the question must be considered

ed as decided, and the surgeon should proceed immediately with his operations.

There is an opinion which was first promulgated by Sir Lucas Pepys, Bart. our late President, that those animals only which have been primarily affected with madness, are capable of propagating the disease: this opinion, if well founded, would afford matter of great consolation to persons who may have been bitten by such animals as may have received the disease secondarily; but as it has not yet been confirmed by the observation of facts, it is not possible that the mind of any person can be easy after the bite of a rabid animal, whether that animal have been primarily or secondarily affected: in both cases, the most powerful remedies should be immediately employed, nor ought we to be influenced by this opinion, indiscriminately in the one case to save, or in the other to destroy, such animals

mals as may have been bitten under suspicious circumstances: those which have bitten any person without having shewn any positive signs of madness, should for obvious reasons be kept alive; but those which have not bitten any person should be destroyed in the apprehension of the accession of the disease.

I will here take the liberty of mentioning the opinion of a physician of high respectability in regard to the trial of a medicine in hydrophobia, which has lately been found of the greatest service in another disease almost as obscure and inexplicable as hydrophobia: "If," says he, "the eau medicinale d'Husson affords such great benefit by diminishing painful and inordinate action in gout, I think it would be right to try it in hydrophobia." In this I perfectly agree with him; but would also add, that if the "Eau Medicinale" cannot easily be procured, the "Vinum Veratri," as

N 2

prepared

prepared at Apothecaries' Hall, by infusing eight ounces of recently dried root of white hellebore in two pints and half of sherry during ten days, would probably be no less efficacious.

Might not this most potent medicine be given also with the fairest prospect of success, where the exhibition of the Pulvis Ipecacuanhæ Compositus is found inconvenient, as is sometimes the case, in tetanus?

XV. *Case by Mr. BLAGDEN, Surgeon at Petworth. Communicated by W. SAUNDERS, M.D. F.R.S. Fellow of the Royal College of Physicians, &c.*

Read at the COLLEGE, June 18, 1811.

THE subject of this case is a lady of a delicate make, aged 66, who has been occasionally afflicted with pain in the seat of the biliary ducts, from an early period of life.

About eighteen years ago, she had a severe attack of this kind, succeeded by hepatitis, from which she with great difficulty recovered. As the nature of the affection was strongly marked, much attention was for a long time paid to the dejections, yet no gall-stone was ever discovered in them: this circumstance may perhaps be allowed to be satisfactorily accounted for, by the size of the gall-stone taken notice of hereafter.

At the latter end of March, 1803, the lady experienced another attack of hepatitis, with very little previous pain

pain in the biliary ducts, which, in spite of medical aid, left a considerable enlargement of, and much obtuse pain in, the liver, that terminated, though very slowly, in an abscess, the most prominent part of which was about midway between the navel and the centre of the spine of the ileum: at this spot an opening rather more than an inch in length, but of great depth, was made into the abscess on August 31.

Between that period and the latter end of March, 1804, several distinct indurations of the liver terminated successively in suppuration, and these suppurations discharged their contents likewise through the original opening. From the high degree of inflammation which happened eighteen years before, as well as from a peculiarity in the feel of the parts immediately surrounding the opening, (not easily to be described, yet giving the idea of almost perfect attachment) there.

there was reason to conclude that adhesion had taken place between the liver and the peritoneal covering of the parietes of the abdomen, and consequently to hope that the circumstance just related might happen: and from the same consideration, there was likewise little cause, after an external opening had been made, to fear an extravasation of matter into the cavity of the abdomen.

On March 23, 1804, a peculiar resistance to the finger was perceivable underneath the integuments of the abdomen, and immediately below the aperture, which left no doubt on the mind that a gall-stone was near; of this, therefore, the patient was apprized.

Three days afterwards, a piece weighing about eight grains came away; and before the end of the third week, six pieces more. These seven pieces weighed fifty-one grains, and when put together with mucilage, (which

was easily done, as they were exactly adapted to each other) evidently formed a part of a large stone.

On April 27, the larger part, (Fig. 2.) came away entire, through the original wound, dilated by the pressure of the stone, and somewhat enlarged by the bursting of the integuments just below the wound, with extreme pain and difficulty indeed, though without surgical assistance: the weight of this part alone is an ounce and sixty grains.

Dr. Baillie has observed, that the colour and arrangement of structure in the outer and inner part of a gall-stone differ very much from each other; this is particularly exemplified in the present instance, when the outer part is knotty, scabrous, and beautifully varied as to colour, and the inner part of a pale orange-colour, (Fig. 3.) and almost regularly marked with concentric circles.

On the end of the stone where the
separation

Fig. 1



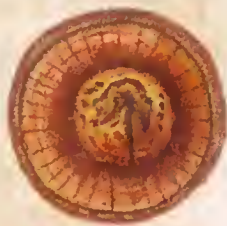
Fig. 2



Fig. 3



Fig. 4



separation took place, (Fig. 4.) the colour, as well as concentric circles, are less evident, both being obscured by coagulated blood; some marks of radiated crystallization are, however, seen here, which are not visible on Fig. 3.

As the ends of both the parts are perfectly smooth and somewhat polished, (an appearance which, it is presumed, could only have been produced by collision against each other) it may be concluded that their separation had taken place a considerable time before they were evacuated.

Although the obstructing cause had, probably for a long time, been very large, and, latterly, appears to have filled the gall-bladder, yet this patient never had any appearance of jaundice: it is reasonable to suppose that the bile had passed into the ductus communis choledochus, through the hepatic duct.

A very profuse discharge of bile

ran perpetually from the wound, for about three weeks after the passage of the larger part of the stone; from that time it gradually lessened, and at the end of the sixth week hardly tinged the dressings; the wound too, at this period, began to diminish, and this diminution goes very slowly on, and the general health and appearance of the patient are at this moment extremely flattering.

The four figures are of the exact size, and (the outside excepted) of the exact colour of the objects they are intended to represent.

The outline, Fig. 1, shows the size of the whole gall-stone; the lower part of it exhibiting the seven small pieces put together with mucilage, and added to the larger one.

In Fig. 3, (as well as in some of the other small pieces) several cracks are visible.

The weight of the whole is an ounce and an hundred and eleven grains:—

grains:—the length three inches and five-eighths:—and

The circumference, (at its largest part) three inches and a quarter.

P. S. *The above account was written about two months ago, since which time the patient's health has gradually improved: it is now completely re-established, and the wound, which is become less in size than a silver penny and quite superficial, appears as if it would very soon be perfectly healed.*

*Petworth,
September 25, 1804.*

XVI. *Two Cases of Diabetes Mellitus, treated with Opium.* By PELHAM WARREN, M.D. F.R.S. *Fellow of the Royal College of Physicians, and one of the Physicians of St. George's Hospital.*

Read at the COLLEGE, Sept. 29, 1812.

THE following cases are offered to the College as evidence of the restraint exercised by large doses of opium upon the secretion of the kidneys and the sweetness of the urine in the disorder called Diabetes Mellitus. Both of these cases occurred in St. George's Hospital. The first patient was entirely under the care of the author through the whole course of the disease. The treatment of the second was commenced by him, and was continued upon the same plan by his friend and colleague Dr. Nevinson, from the beginning of August to the beginning of December, after which period the author resumed the care of the patient.

John

John Tranter, aged 22, by occupation a servant, of lightish hair, florid complexion, and dark eyes, in general healthy, had, for a quarter of a year previous to the attack of diabetes, been affected at intervals with sickness at the stomach in a morning, and irregularity of bowels ; his tongue was usually white and dry ; during the early part of the day he had languor and feverish feelings, which however were not sufficient to induce him to apply for medical aid. On the fifth of August 1811, he left London with his master, on a tour through some part of Scotland. During the greater part of the journey he travelled on a coach-box, which was not fixed upon springs, and complained much of the roughness of this mode of conveyance. On his way to Edinburgh he remained with his master a fortnight at Harrogate, where he was induced to drink the water of that place, in order to relieve the irregularity of bowels
and

and feverishness of which he had for some time complained. According to his calculation, in the course of ten days he had drunk about a gallon of the Harrowgate water, without its having produced any evacuation from his bowels, when he was seized with a vomiting of bile, which lasted eight or ten hours, and was followed by a small stool. From this time he remained costive, and was occasionally a week without having a stool, and then only by the assistance of purging medicine. From Harrowgate he travelled to Edinburgh by the same mode of conveyance, and during the whole of his journey complained of pain and weight in the stomach and across the chest. At Edinburgh he remained a fortnight, and soon after his arrival began to perceive a slight swelling of the ankles, which subsided after rest, to experience considerable thirst, and a great increase of appetite. His urine became of a pale colour, and
was

was augmented in quantity, as far as he could judge, to eight or nine pints in every twenty-four hours. The increase of urine created no alarm, and was attributed by him to the unusual quantity of liquid which he drank: at the same time he was sensible of a diminution of strength.

All these symptoms were aggravated in the course of his journey through Scotland, and he began to feel a weary pain in his loins, giving him the sensation of weakness of that part; his skin became dry, and he noticed that the glans penis assumed a dark cherry red colour. This appearance, he has since observed, has always varied with the quantity of water that he has made, the part resuming the natural colour in proportion to the diminution of urine. There has neither been phimosis nor excoriation in the course of the disease. Neither at Edinburgh nor on his journey, nor on his return to London, did he apply for medical assistance

assistance till the month of December 1811, when he put himself under the care of a gentleman, who first ascertained that the urine was sweet, and directed him to evaporate portions of it, which yielded a considerable residuum, in taste and consistency resembling treacle. At this time the quantity of urine amounted to thirteen pints in twenty-four hours. He was very judiciously ordered to confine his diet to animal food, and to drink lime-water. This plan was not rigidly adhered to by him; for, from his own confession, it appeared that he used occasionally to eat small portions of bread. The quantity of urine from the middle of December, 1811, to the 12th of February, 1812, while he was under this regimen, fluctuated between thirteen and eleven pints; but he was not sensible of any permanent diminution either in its quantity or sweetness. His strength gradually declined, he lost flesh, and
being

being unable to work, was admitted into St. George's Hospital, on February 12th, 1812. At this time he was weak, his countenance was of a purplish red hue, and bloated, his tongue white, his pulse quicker than natural, his feet and ancles were swelled, his skin was dry and scurfy, and he complained of pain in the back and loins. His appetite and thirst were very considerable, his urine was sweet to the taste, of a light straw colour, and faint sweetish smell. The quantity of it discharged in twenty-four hours amounted to fourteen pints. The quantity of liquid drunk to eight pints. He was ordered to take a scruple of the compound powder of Ipecacuanha every night. His diet was confined to animal food. His drink was not limited either in quantity or quality.—February 14th, six ounces of blood were taken from the loins by cupping, and a blistering plaster was applied to the part which had been

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cupped, in consequence of increase of pain; and the compound Ipecacuan powder was ordered to be taken night and morning. 19th. The pain was removed by these means, the skin had become soft, there was no nausea, and the bowels acted regularly. The dose of the powder was increased to half a drachm night and morning. 28th. The urine was diminished, the thirst and appetite were lessened, the pulse and appearance of the tongue were nearly the same. The dose of the powder was increased to two scruples.

March 2. The dose was increased to two scruples and a half. 6th. On this day the patient complained of weakness, heat of the stomach, and slight giddiness. The dose was increased to a drachm. 13th. The urine ceased to be sweet on the 10th instant. On the 12th and 13th the quantity of urine was less than the quantity of drink, by two pints each day.

day. There was a disposition to nausea, but no unusual perspiration. 16th. Vomiting having been excited by the powder, it had been taken only once a-day. During the omission of the second daily dose of it the urine had not increased in quantity, but had become slightly sweet. The patient had not deviated from his animal diet. He was ordered to take two scruples of the powder twice a-day. 20th. The powder no longer agreed with him, and was discontinued. Instead of it a scruple of kino and four grains of opium, a quantity equal to that which is contained in two scruples of the compound Ipecacuan powder, were ordered twice a-day. 24th. During the last two days the urine had increased, and had exceeded the drink by one pint. The dose of opium was increased to five grains twice a-day. 27th. The thirst was augmented, apparently in consequence of the opium.

The quantity of urine was reduced below that of the drink, but remained sweet. The opium was increased to six grains, viz. the quantity contained in the largest dose of the compound Ipecacuan powder which had been given.

April 3. The urine was no longer sweet. 6th. The bowels were costive; there was headach and languor. The powder was ordered to be omitted: five grains of calomel, to be followed by a purging draught, were prescribed. 10th. The bowels had been imperfectly relieved by the calomel and the purging draught; they were ordered to be repeated, and the powder was directed to be resumed after the bowels had acted freely. 13th. The opium was increased to six grains and a half. 18th. There had been pain and heat of the stomach, attended with sickness. An emetic was prescribed to be taken in the evening, and on the following night the powder was ordered to be resumed. 20th.

The bowels were confined; a purging draught was given on this and the following day. 24th. The bowels were still costive. The powder was omitted, and a purge of oil and tincture of senna was directed to be taken every four hours till the bowels had acted. No register of the urine or drink had been kept on the 22d. 27th. The purging draughts acted powerfully on the bowels; the powder was resumed.

May 1. The patient complained of great heat of the stomach, which he attributed to the animal diet. He was allowed bread and rice-pudding, and ordered to take a scruple of pure magnesia with each dose of the powder. 8th. He was costive, and still complained of heat at the stomach. The powder of kino and opium were omitted, and the magnesia was continued; the purge was repeated. 15th. He complained of great languor and weakness, the swelling of his ancles
was

was increased, and he was costive. A purging draught was directed for him, and he was ordered to take the bark. 22d. The patient was costive, and complained of an increase of languor; the urine was slightly sweet. Six drachms of the sulphate of magnesia were prescribed. 25th. The urine, from the morning of the 23d, had been decidedly sweet. Three grains of opium, about half the quantity contained in the largest dose which had been at any time given, were ordered for him night and morning, and he was allowed to continue his animal and vegetable diet as usual. 29th. The first dose of the opium produced considerable perspiration, and on the following morning the urine was no longer sweet. He had felt great relief from languor since the opium had been resumed.

June 5. The patient was improved in appearance and strength; had no uneasiness from thirst, no inordinate
appetite

appetite for food. The pulse was firm, and of a natural frequency; the tongue was less white, but the ancles were still slightly swelled. The quantity of urine made had been daily three pints, of a natural colour and odour, and without any sweet taste. After this day he became an out-patient of the hospital, but did not attend in consequence of his removal into the country.

For the averages of the quantities of urine and drink, *vide* Table No. 1. In this and the following Table, the third and fifth columns mark the total quantities of urine and drink during the number of days noted in the second column; the fourth and sixth mark the averages of these quantities; the seventh, eighth, tenth, and eleventh, the greatest and least quantities of urine and drink in twenty-four hours, during the period noted in the second column; the ninth and twelfth, their averages.

CASE

CASE II.

THOMAS ANDREWES, æt. thirty-eight, a man of delicate structure, and much below the middle size of stature, by trade a polishing smith, began to find his health declining about the month of March, 1812. By degrees he became emaciated, lost his strength, and was unable to continue his work. As his health declined, he found that he had an unusual disposition to make urine, which passed freely and in large quantities, was pellucid like rock-water, as he described it, and proved, to his great surprise, on tasting it, to be intensely sweet. At the same time he experienced a degree of thirst which was very inconvenient to him; and although uneasy at the diminution of his strength, he felt confident of recovery from the excellence of his appetite. Previously to his having noticed these symptoms, he had observed

served several white pimples upon the glans penis, which he suspected to be venereal; they were, however, removed in a few days by a lotion and some pills. — Before he had discontinued the use of the pills his gums became sore; since that period many of the teeth of the upper jaw have fallen out; and the state of the gums is at present such as to induce a supposition that the soreness formerly complained of was rather to be attributed to the diabetic complaint, than to the remedy which he had been using for symptoms supposed to be venereal. He has never observed any dark redness of the glans penis during the course of his disorder.

On the 20th of June he was admitted into St. George's Hospital. At this period he appeared thin and weak, his tongue was white, his pulse feeble and beating eighty strokes in a minute. On the 22d the quantity of urine made was eight pints, and
the

the liquid drunk amounted to six. The urine was sweet, and, on evaporation, yielded a sweet extract. The treatment of the disorder was commenced this day with a single dose of opium, amounting to two grains, and the patient was allowed the usual diet of the hospital for convalescents, consisting of animal and vegetable food. On the 26th, the dose of opium was given twice a day. On the 29th, the dose was increased to two grains and a half. On the 1st of July, to three grains. On the 6th, to four. On the 10th, to four and a half; and on the 13th to five grains. The quantity of urine discharged during the week, which terminated on the 29th of June, was fifty-five pints; and the quantity of liquid taken amounted to forty-one pints.

On July 6th, the termination of the second week, the total of urine amounted to forty-one pints, and the
total

total of drink to thirty-nine. On the 13th, the totals of urine and drink were each thirty-six pints. The urine was still sweet although reduced from fifty-five to thirty-six pints; or, on an average for each day, from $7\frac{6}{7}$ to $5\frac{1}{7}$ pints. No inconvenience had been felt from the opium; the patient on the contrary appeared to be revived by its use. In order to ascertain how far the impression which appeared to have been made upon the disorder was likely to be permanent, the opium was discontinued on the 17th. On the 20th, the total of urine for the week had increased from thirty-six pints to fifty-five pints, and the drink from thirty-six to fifty-three pints; but the averages of the greatest and least quantities of urine made, and drink taken, in twenty-four hours during that period, were equal. On the 24th, the patient was bled, in consequence of pain in the neighbourhood of the stomach. The urine
and

and drink for the week concluding on the 27th remained nearly as they had been at the end of the preceding week. The opium was on this day resumed, in doses of three grains, twice a day ; and the dose was augmented on the 31st to four grains.

On the 4th of August, the urine and drink for the preceding seven days, were equal in quantity, the urine having been diminished from fifty-five pints to forty-five, and the drink from fifty to forty-five pints. On the 7th of August, the patient came under the care of Dr. Nevinson, who continued the dose of opium at four grains ; and in consequence of the appearance of some pulmonic symptoms, ordered eight ounces of blood to be taken from the arm, a blister to be applied to the epigastrium, and a spermaceti draught, with oxymel of squills, to be taken three times a day. The total of urine in the week ending on the 10th was increased

creased to fifty-four pints, and the total of drink to fifty-two; but the averages of the greatest and least quantities for twenty-four hours during that period, were equal. On the 17th, the draught was omitted. The urine for the week was reduced to forty pints, and the drink to thirty-six. During each of the three following weeks, the total of urine did not exceed thirty-six pints, and the total of drink was either equal to, or just below the total of urine. The total of urine for the succeeding week, ending the 14th September, was reduced to thirty-one pints, the total of drink was thirty-five. The dose of opium had been continued at four grains, and had been given twice a day till the 31st of August, when it was increased to five grains. On the 3d September, five grains were given three times a day; and on the 14th, four times a day. On the 19th, the urine had ceased to be sweet. From the

14th

14th of August to the 19th of September the patient had been confined to animal food, and it will appear, by reference to the annexed Table, that the diet seemed to have assisted in checking the secretion of urine. On the 19th, the restriction upon the diet was removed, and vegetable food was allowed. On the 21st, the opium was given only twice a day. The urine and drink for the week were of each thirty-four pints. On the 28th, the sweetness of the urine had returned. The total of urine for the week was forty-two pints, and the total of drink was thirty-five pints. In consequence of this alteration, the animal diet was resumed.

October 5. The total of urine was thirty-one pints, and the total of drink was thirty-two, being a diminution of nine pints in the week from the period of the resumption of the animal diet. The opium was omitted, and the patient was directed to confine himself
to

to animal food, in order to ascertain the proportionate influence of the medicine and the diet. He remained a fortnight under this plan. Oct. 12th. At the end of the first week, the total of urine was forty-one pints, the total of drink was forty-seven pints. On the 19th, the conclusion of the second week, the total of urine was thirty-seven pints, and the total of drink thirty-nine. An increase had therefore taken place in the urine of nine pints during the first week, and of five during the second, since the omission of the opium. The opium was resumed in the dose of five grains three times a day. On the 28th, five grains were given four times a day.

Nov. 2. The total of urine was thirty-three pints for the week, and the total of drink was thirty-five pints: the urine was not sweet, and it is remarkable that it again ceased to be sweet as soon as the dose of opium had arrived at the point to which it

5 had

had formerly been carried, when the first cessation of sweetness took place. The dose of opium was increased to six grains. On the 9th, the urine had rather decreased; eight grains of opium were given four times a day. 11th. The animal diet was discontinued. 13th. The dose of opium was increased to nine grains. 19th. The total of urine for the week was rather increased. Ten grains of opium were given four times a day. 23d. The total of urine was reduced to twenty-three pints, the total of drink to twenty-six. On the 30th, the total of urine was twenty-six, the total of drink thirty-two. The patient was bled on account of pain in the head, and the blood proved buffy. During the period in which the dose of opium had amounted to ten grains, the patient had perspired profusely, had been sleepy and giddy, but had suffered no other inconvenience: the urine had a natural appearance and odour,

odour, and yielded a very inconsiderable extract.

December 2. The opium was taken only three times. On the 3d, only twice. On the 4th, the dose was reduced to nine grains twice in the day. On the 7th, to five. The urine on the 7th had increased two pints in the course of the week, and had a tendency to sweetness. On the 9th, the dose of opium was reduced to two grains and a half: at this period the patient again came under the care of Dr. Warren. 14th. The urine for the last seven days had increased from twenty-eight to thirty-five pints, and was become sweet: the opium was increased to four grains twice a day. On the 18th, it was increased to five grains. The total of urine for seven days, ending on the 21st, had decreased to thirty-three pints: the urine had not only ceased to be sweet, but was become intensely bitter. The opium was increased to six grains twice

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a day. 28th. The total of the urine for the week was twenty-five pints, and the total of drink thirty pints; the urine was high coloured, had a strong urinous smell, and bitter taste. A scruple of bark and five grains of aromatic powder were added to each dose of the opium.

January 4. The urine for the week was twenty-eight pints, of a dark colour and urinous odour, and deposited a considerable sediment; the drink was thirty-two pints. The patient complained of langour and sleepiness: the opium was discontinued. 6th.

The opium was resumed at night only.

11th. The urine remained stationary at twenty-eight pints, was not sweet, and had acquired a perfectly natural character. 18th. The character of the

urine remained natural, the quantity of it was rather increased. The urine having recovered its natural character, and having remained for a month without sweetness, under the use of animal

and vegetable diet, and a dose of opium comparatively small, the restraint exercised by the remedy appeared to be proved.

It is proper to remark, that during the whole course of the treatment the patient had suffered from a cough attended with a yellow expectoration, from difficulty of breathing as often as he lay upon the left side, and many other symptoms which mark the progress of pulmonary complaints.

It is also worthy of remark, that the bowels became relaxed at the period when the opium was raised to its greatest dose, and remained soluble as long as that dose was continued.

Observations.

The success which is recorded to have attended a diet of animal food in cases of diabetes mellitus, may, on the first view of the case of John Tranter, suggest a doubt whether the

diminution of the urine and the cessation of its sweetness should be attributed to the diet or to the opium ; but by examining the case, and comparing it with the table annexed, the animal food if allowed to have produced any effect, will appear to have been an auxiliary rather than a principal agent in the abatement of the disorder. For it will be observed that previously to the administration of opium the patient had pursued a course of this diet for several weeks without advantage ; that during the whole of the treatment, the discharge of urine was diminished or increased in proportion to the augmentation or diminution of the quantity of opium ; that at the dose of six grains administered twice a day, the urine ceased to be sweet ; that the sweetness returned on the reduction of the dose, and was again removed by raising the dose of opium to six grains. It is farther to be remarked, that at this dose the
urine

urine continued to diminish, to remain without sweetness, and gradually to recover a natural character, although the animal diet was suspended, and that the degree of sweetness which began again to be perceptible in the urine, after the opium had been for some time omitted was immediately removed, without the assistance of animal diet, by a dose of opium comparatively trifling. Some advantage might have been attributed to the Ipecacuan and sulphate of potash, with which in the first instance the opium had been combined, in the compound Ipecacuan powder, and to the kino, with which it was given in the second instance, had not the dose of kino remained stationary, while the quantity of opium was increased, and had not the slight return of sweetness which took place on the omission of the opium and kino been speedily relieved by opium alone. But these doubts seem to be fully satisfied by the treatment

ment and progress of the case of Andrews ; for this case was marked with a similar progressive diminution in the quantity of urine, although the opium was given unmixed with other medicines, and although in the early and some of the subsequent stages of the disorder, the patient was not restricted to any particular diet. The urine also was subject to the same varieties as in the former case, according to the augmentation, diminution or discontinuance of the doses of opium. These effects are therefore clearly attributable to the sole agency of the remedy, and prove satisfactorily that the subsequent change in the urine, which took place while the patient was confined to an animal diet, was effected by the influence of opium : nor ought this opinion to be weakened by the relapse of the urine on the substitution of vegetable for animal food ; because at the period of this alteration of the diet, the dose of opium had been considerably

siderably diminished. It is evident that while the opium was continued at a reduced dose, the renewal of animal diet was incapable of recovering the urine from its relapse; for the sweetness remained, although the quantity was diminished, until the opium had been progressively augmented to the dose which had been given antecedent to the restoration of the urine to its natural character.— It is further evident that the animal food alone was unequal to effect this reduction, for when by the omission of the opium the disorder was solely submitted to the influence of animal diet, the discharge of urine was increased. In both cases too at an advanced stage of the treatment, the sweetness of the urine which had returned on the diminution or suspension of the doses of opium, was removed by a fresh exhibition of it, or an increase of its quantity without recurring to the agency of animal diet.

From

From the coincidence of the two cases in this and the following circumstances, a further inference may be drawn in favor of the effect of the remedy. For it appears that in the case of Tranter, the urine ceased to be sweet soon after the dose of opium had been raised to six grains and had been taken twice a day. On the diminution of the quantity of opium taken in each dose, the sweetness returned and was not again removed till the dose of opium was again restored to its original quantity. In the same manner, the sweetness of the urine in the case of Andrewes ceased shortly after the dose of opium had reached five grains, and had been taken four times a day, and on the reduction of the opium; the urine resumed its sweetness and persevered in it until the dose was gradually raised to its former standard. Twelve grains in twenty-four hours in the case of Tranter, and twenty grains within the same period

in the case of Andrewes, appear to have been the quantities required to produce this effect.

The experience of several physicians of distinguished character has proved the efficacy of an animal diet in the treatment of Diabetes, and in justice to such authority some part of the benefit derived in the cases just detailed must be ascribed to the use of animal food ; but whatever advantage may have arisen from it must be considered as trifling, when compared with the effect produced by the opium, and it will not be urging the utility of the remedy too strongly to assert that the final effect upon the urine would probably have been the same if the animal diet had not been adopted. Two cases form but an imperfect foundation for the establishment of any practical fact in medicine, and further experience is required to prove the efficacy of opium in the treatment of Diabetes mellitus. These instances, however,

however, may be considered as proofs of the restraint which opium is capable of exercising over the action of the kidneys, and as affording encouragement to the investigation of the power of this remedy in a disorder which is commonly fatal, and in which the advantage of medicine has been esteemed highly problematical.

CASE OF JOHN TRANTER.

Table of the progressive state of the Urine and Drink, measured by Pints; and of the Opium administered.

1812.	Date.	No. of Days.	Quantities for No. of days.				Greatest and least quantities per diem.						Opium and other Medicines.	State of Urine.	Diet.
			Urine.		Drink.		Urine.			Drink.					
			Total Amount.	Average Amount.	Total Amount.	Average Amount.	Maximum.	Minimum.	Medium.	Maximum.	Minimum.	Medium.			
Feb. 12	1	14		8								Pulv. Ipec. C. ʒj. o. n.	Sweet.		
14	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Cuc Cr. ad ʒvj. Em.			
												lytta lumbis & pulv.			
												Ipec C. ʒj bis die.	Sweet.		
19	6	69	11 $\frac{1}{2}$	38	6 $\frac{1}{3}$	15	10	12 $\frac{1}{2}$	9	5	7	Pulv. Ipec. C. ʒss bis			
25	9	94	10 $\frac{3}{4}$	39	4 $\frac{3}{9}$	12	9	10 $\frac{1}{2}$	5	4	4 $\frac{1}{2}$	 ʒij —			
Mar. 2	...											 ʒiiss. —	Not sweet.		
6	7	59	8 $\frac{3}{7}$	32	4 $\frac{4}{7}$	10	8	9	5	4	4 $\frac{1}{2}$	 ʒj —			
10	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....			
13	7	54	7 $\frac{5}{7}$	47	6 $\frac{5}{7}$	9	6	7 $\frac{1}{2}$	8	4	6	 ʒj semel	Sweet.	Animal Food.	
15	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	..... ʒij bis			
16	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....			
20	7	45	6 $\frac{3}{4}$	52	7 $\frac{3}{4}$	7	6	6 $\frac{1}{2}$	9	5	7	R Kino ʒj Opii	Sweet.		
												gr. iv			
24	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	..... gr. v			
27	7	64	9 $\frac{1}{7}$	68	9 $\frac{5}{7}$	10	7	8 $\frac{1}{2}$	10	8	9	 gr. vj	Not sweet.		
April 3	7	52	8 $\frac{3}{7}$	62	8 $\frac{6}{7}$	9	7	8	10	8	9	.....			
6	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Omittantur Kino			
												& Opium donec	Sweet.		
												alvus soluta fu-			
												erit.			
10	7	52	7 $\frac{3}{7}$	63	9	10	6	8	11	8	9 $\frac{1}{2}$		Not sweet.		
13	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	R Kino ʒj Opii			
												gr. viiss			
17	7	49	7	61	8 $\frac{5}{7}$	9	6	7 $\frac{1}{2}$	10	7	8 $\frac{1}{2}$		Sweet.		
18	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Haust. emeticus.			
20	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Haust. purg. hodie			
												& cras.	Not sweet.		
24	6	34	5 $\frac{2}{3}$	39	6 $\frac{1}{2}$	7	4	5 $\frac{1}{2}$	7	5	6	Omittantur Opium &			
												Kino. Haust. purg.			
27	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Resumantur Opium			
												& Kino.	Sweet.		
															
															

CASE OF JOHN TRANTER CONTINUED.

1812.		Quantities for No. of days.				Greatest and least quantities per diem.						Opium and other Medicines.	State of Urine.	Diet.
Date.	No. of Days.	Urine.		Drink.		Urine.			Drink.					
		Total Amount.	Average Amount.	Total Amount.	Average Amount.	Maximum.	Minimum.	Medium.	Maximum.	Minimum.	Medium.			
May 1	7	29	4 $\frac{1}{7}$	35	5	5	4	4 $\frac{1}{2}$	6	4	5	Magnes. ʒi cum sing. dos. Kino & Opium. Omittantur Opium & Kino. P. in usu Magnesiæ. Haust. purgans. Magn. Sulp. ʒvj. Opii gr. iij bis die.	}	Animal & Veger- table Food.
	8	7	24	3 $\frac{2}{7}$	29	4	3	3 $\frac{1}{2}$	5	4	4 $\frac{1}{2}$			
	15	7	25	3 $\frac{1}{7}$	34	4	3	3 $\frac{1}{2}$	6	4	5			
	22	7	25	3 $\frac{1}{7}$	34	4	3	3 $\frac{1}{2}$	5	3	4			
	25	...	...	...	...	...	...	...	...	...	...			
	26	...	...	...	...	...	...	...	...	...	...			
	29	7	23	3 $\frac{2}{7}$	29	4	3	3 $\frac{1}{2}$	5	3	4			
June 5	6	18	3	24	4	3	3	3	4	4	4	}	Sweet Not sweet.	

TABLE 2.—CASE OF THOMAS ANDREWES.

Table of the progressive state of the Urine and Drink, measured by Pints, and of the Opium administered.

1812.		Quantities for No. of Days.				Greater and least quantities per diem.						Opium and other Medicines.	State of Urine.	Diet.
		Urine.		Drink.		Urine.			Drink.					
Date.	No. of Days.	Total Amount.	Average Amount.	Total Amount.	Average Amount.	Maximum.	Minimum.	Medium.	Maximum.	Minimum.	Medium.			
June 22	1	8...	6...									Opii gr.ij o. n.		
26	...											bis die		
29	7	55 7 $\frac{6}{7}$	41 5 $\frac{6}{7}$	8	7	7 $\frac{1}{2}$	6	5	5 $\frac{1}{2}$			gr. iiss		
July 1	...											gr. ij		
6	7	41 5 $\frac{6}{7}$	39 5 $\frac{4}{7}$	7	5	6	6	5	5 $\frac{1}{2}$			gr. iv		
10	...											gr. ivss		Animal
13	7	36 5 $\frac{1}{7}$	36 5 $\frac{1}{7}$	6	5	5 $\frac{1}{2}$	6	5	5 $\frac{1}{2}$			gr. v		
17	...											Nihil		
20	7	55 7 $\frac{6}{7}$	53 7 $\frac{4}{7}$	8	7	7 $\frac{1}{2}$	8	7	7 $\frac{1}{2}$			.....		and
24	...											V. S. ad. 3viij.		
27	7	55 7 $\frac{6}{7}$	50 7 $\frac{1}{7}$	8	7	7 $\frac{1}{2}$	8	6	7			Opii gr.ij bis die		
31	...											gr. iv		
Aug. 3	7	45 6 $\frac{3}{7}$	45 6 $\frac{3}{7}$	7	6	6 $\frac{1}{2}$	7	6	6 $\frac{1}{2}$			.....		
7	...											Empl. lyttæ		
												Epigastrio		
												V. S. ad		
												3viij Haust.		
												cetacei cum		
												oxym. scillæ		
												3i ter.....		
	10	7	54 7 $\frac{5}{7}$	52 7 $\frac{3}{7}$	8	6	7	8	6	7		.....		
	14	...										.....		
	17	7	40 5 $\frac{5}{7}$	36 5 $\frac{1}{7}$	7	4	5 $\frac{1}{2}$	6	4	5		Omitt. haust.		
												cetacei, &c.		
	24	7	32 4 $\frac{4}{7}$	32 4 $\frac{4}{7}$	5	4	4 $\frac{1}{2}$	5	4	4 $\frac{1}{2}$		.....		Animal
	31	7	36 5 $\frac{1}{7}$	34 4 $\frac{6}{7}$	6	5	5 $\frac{1}{2}$	5	4	4 $\frac{1}{2}$		gr. v		
Sept. 3	...											ter		Food.
7	7	36 5 $\frac{1}{7}$	35 5	6	5	5 $\frac{1}{2}$	5	5	5			.....		
14	7	31 4 $\frac{3}{7}$	35 5	5	4	4 $\frac{1}{2}$	6	4	5			quater		
19	...											.....		
21	7	34 4 $\frac{6}{7}$	34 4 $\frac{6}{7}$	6	4	5	6	4	5			bis		
28	7	42 6	35 5 $\frac{1}{6}$	6	6	6	6	4	5			.....		

CASE OF THOMAS ANDREWES CONTINUED.

1812.		Quantities for No. of Days.				Greater and least quantities per diem.						Opium and other Medicines.	State of Urine.	Diet.
		Urine.		Drink		Urine.			Drink.					
Date.	No. of Days.	Total Amount.	Average Amount.	Total Amount.	Average Amount.	Maximum.	Minimum.	Medium.	Maximum.	Minimum.	Medium.			
Oct. 5	7	31	4 $\frac{3}{7}$	32	4 $\frac{4}{7}$	5	4	4 $\frac{1}{2}$	5	4	4 $\frac{1}{2}$	R Pil. e micâ panis	Sweet.	Animal Food.
12	7	41	5 $\frac{6}{7}$	47	6 $\frac{5}{7}$	7	5	6	7	5	6	.....		
19	7	37	5 $\frac{3}{7}$	39	5 $\frac{4}{7}$	6	4	5	6	5	5 $\frac{1}{2}$	... Opii gr.v ter die		
26	7	32	4 $\frac{4}{7}$	34	4 $\frac{6}{7}$	5	4	4 $\frac{1}{2}$	5	4	4 $\frac{1}{2}$	.....		
28	...	...	...	...	...	...	...	...	...	...	...	 quater die		
Nov. 2	7	33	4 $\frac{5}{7}$	35	5	5	4	4 $\frac{1}{2}$	5	5	5	 gr. vj —	Not Sweet.	
9	7	31	4 $\frac{3}{7}$	34	4 $\frac{6}{7}$	5	4	4 $\frac{1}{2}$	6	4	5	 gr.vij —		
11	...	...	...	...	...	...	...	...	...	...	...	.....		
13	...	...	...	...	...	...	...	...	...	...	...	 gr. ix —		
16	7	33	4 $\frac{5}{7}$	35	5	5	4	4 $\frac{1}{2}$	6	4	5	 gr.x —		
23	7	23	3 $\frac{2}{7}$	26	3 $\frac{5}{7}$	4	2	3	5	3	4	.....		
30	7	26	3 $\frac{5}{7}$	32	4 $\frac{1}{7}$	4	2 $\frac{1}{2}$	3 $\frac{1}{4}$	5	3 $\frac{1}{2}$	4 $\frac{1}{4}$	V. S.ad 3vij		
Dec. 2	...	...	...	...	...	...	...	...	...	...	...	 ter —	Sweet.	Animal and Vegetable Food.
3	...	...	...	...	...	...	...	...	...	...	...	 bis —		
4	...	...	...	...	...	...	...	...	...	...	...	 gr.vij —		
7	7	28	4	31	4 $\frac{3}{7}$	5	3	4	5	4	4 $\frac{1}{2}$	 gr.v —		
9	...	...	...	...	...	...	...	...	...	...	...	 gr.iiss —		
14	7	36	4 $\frac{4}{7}$	30	4 $\frac{2}{7}$	6	5	5 $\frac{1}{2}$	5	4	4 $\frac{1}{2}$	 gr.iv —		
18	...	...	...	...	...	...	...	...	...	...	...	 gr.v —		
21	7	33	4 $\frac{5}{7}$	33	4 $\frac{5}{7}$	5	4	4 $\frac{1}{2}$	6	5	5 $\frac{1}{2}$	 gr.vj —		
28	7	25	3 $\frac{4}{7}$	30	4 $\frac{2}{7}$	4	3	3 $\frac{1}{2}$	5	4	4 $\frac{1}{2}$	R Pulv. Cinchon —		
												3j Pulv. Arom.	Not sweet.	
												gr. v.		
Jan. 4	7	28	4	32	4 $\frac{4}{7}$	5	4	4 $\frac{1}{2}$	6	4	5	 Omitt. Opium		
6	...	...	...	...	...	...	...	...	...	...	...	 Opii gr.vi semel		
11	7	28	4	32	4 $\frac{4}{7}$	6	3	4 $\frac{1}{2}$	5	3	4			

APPENDIX

To the foregoing Cases of Diabetes Mellitus.

By PELHAM WARREN, M.D. F.R.S.

SINCE the paper, relating two cases of Diabetes Mellitus treated with opium, was submitted to the Collège, an opportunity has occurred of examining the state of the kidneys in Andrewes, the subject of the second case, who died in consequence of a rapid increase of the pulmonary symptoms under which he had laboured during the whole course of the diabetic disorder.

During the whole of the period which intervened between the cessation of sweetness in the urine last recorded in the case, and the death of the patient, there was no relapse either in respect of the quality or quantity of the urine, and the total of urine voided in the last six days of the patient's life did not exceed eight pints.

The body was examined twenty-four hours after death, when the following appearances were observed. The heart was small and flaccid, the pericardium did not contain any water. The right lung looked healthy externally and was free from adhesions, but, on cutting

cutting into its substance, was found to contain tubercles in an incipient state. The left lung adhered so strongly to the pleura costalis that it was with difficulty detached. On being removed from the body, the whole substance of it appeared to be diseased, and divided into cells of different dimensions, containing matter. The cavity of the chest did not contain any water. The liver was in a natural state. The spleen was sound and of its usual size. The blood-vessels which pass from the spleen to the liver were of the usual dimensions. A portion of the greater curvature of the stomach immediately below the entrance of the œsophagus, exhibited some patches of superficial inflammation, and at the small end of the stomach extending a little way into the pylorus, there was a similar appearance. The intermediate portion of the stomach was perfectly natural. Upon various parts of the cellular membrane of the abdomen, a gelatinous substance was thrown out, resembling the jelly which is sometimes found between the membranes of the brain.

The following description of the state of the kidneys was drawn up by Mr. Brodie the assistant surgeon of St. George's Hospital, by whom their structure was minutely examined.

On examining the kidneys, with reference to the usual appearance of these organs in a healthy state, both of them were found to be of an unusually firm and grisly texture. The cellular membrane surrounding the pelvis and
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infundibula was loaded with serum, and portions of lymph were diffused through it, bearing the appearance of jelly, and resembling that which had been observed in various parts of the cellular membrane of the abdomen. In order to ascertain the state of the blood vessels, one of the kidneys was injected with size and vermillion previously to examination, the other was examined in its natural state. On cutting into the substance of the injected kidney, the cortical part appeared unusually red, and the cryptæ were seen more numerous, larger, and more distinct, than I had ever observed them, even under circumstances of the most fortunate injection. The blood-vessels of the cortical substance of the kidney which had not been injected, were unusually turgid. The ureters, the emulgent artery and vein were of the natural dimensions. The renal capsules were firmer and harder in their texture than natural, and seemed to partake of the gristly structure of the kidneys; in other respects they were not diseased. The bladder was sound.

XVII. *Case of Inflammation, and subsequent Mortification, of the Adipose Membrane surrounding both Kidneys; with the Appearances on Dissection.* By THOMAS TURNER, M. D. *Fellow of the Royal College of Physicians, Physician to St. Thomas's Hospital, &c.*

Read at the COLLEGE, November 12, 1812.

A MARRIED lady, in the thirtieth year of her age, rather under the middle stature, and very corpulent, on Saturday, the 21st of June, 1806, rode on horseback for several hours; by which she was very much heated and fatigued. She sat, for some time afterwards, in a room with the windows and door open; but was not sensible of any inconvenience from it. She passed the rest of the day as usual; and at supper eat heartily of lobster, although it generally disagreed with her stomach, and made her ill. On retiring to her bed-room, she felt sick, and vomited: she also complained of much pain in her bowels. These
symptoms

symptoms were attributed to her having eaten the lobster. An emetic was administered by the advice of the family apothecary, and on the following morning, a purgative draught; which, not operating as soon as might be expected, was repeated, and then produced plentiful evacuations from the bowels. In the evening, she said she felt quite relieved, and had no complaint to make, except that her hands and feet were colder than usual. She was advised to go early to bed, and to take something warm: no doubt was entertained that she would be quite well again on the next day. In the night, however, she experienced considerable pain in her back and loins, which she thought was greatly relieved, by having them rubbed for some time. She became, however, very restless, and about five o'clock on Monday morning, her restlessness and anxiety had increased to such a degree, that her husband began to be

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alarmed. He sent accordingly for the apothecary, who came in about an hour afterwards. By this time, her extremities had become quite cold, and no pulsation could be perceived at the wrist. On his expressing apprehension of immediate danger, I was sent to ; but as the patient lived at some distance from London, I did not see her till between one and two o'clock in the afternoon. I then learned, that she had taken some hot brandy and water, with a few drops of tincture of opium, which appeared to have revived her ; so that her friends thought her better than she had been in the morning. Her anxiety, however, was extreme ; and her breathing occasionally very much oppressed : her feet, legs, hands and arms, were quite cold ; not the slightest pulsation could be distinguished in the radial artery ; her countenance was livid, and her features drawn up : her mental faculties, however, were unimpaired.

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ed. She said she was quite free from pain: she complained of no uneasiness when I pressed her abdomen with my hand, neither could I perceive any unusual tension or hardness. She assured me, she had experienced neither pain nor difficulty in making water, neither was she aware of its having been less copious than common. She gradually sunk till about four o'clock, when she expired.

I obtained leave to examine the body, two days after her death, and the following appearances were observed in the dissection.

Rather more than the usual quantity of fluid was found in the cavity of the thorax: all the viscera contained in it, were perfectly sound and natural.

In the abdomen, slight marks of inflammation were perceived on the peritonæal coat of the stomach, on that part of its greater curvature, which adjoins the spleen, and arch of the colon.

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The part of the colon, which lies immediately over the left kidney, was much inflamed.

The liver was in a perfectly natural state, except that it had one very small tubercle, in the anterior part of its right lobe.

The gall-bladder contained five rather large biliary concretions.

The pancreas was inflamed through its whole substance, and a considerable portion of its left extremity was in a state of mortification.

The whole of the adipose substance surrounding both kidneys, was in a gangrenous state, exhibiting a large mass of black pulpy matter. The capsules of both kidneys were inflamed, and that of the right kidney partly mortified: slight traces of inflammation were also found in the internal structure of both kidneys.

All the other viscera were in a natural state.

We may remark, that through the whole

whole course of this disease, the urine was secreted in proper quantity and appearance; that there was no pain felt in the ureters, nor any irritation in the urinary bladder: that the nausea, and pain in the bowels, were speedily relieved by the medicines that were given for that purpose: and, moreover, that the symptoms of general inflammation must have been very slight, as they eluded the observation of the very respectable medical practitioner, who visited the patient frequently, during the progress of the complaint. We may therefore fairly infer, that the inflammation did not commence in the kidneys; neither have we any reason to suppose, that it originated in the pancreas, or colon: on the contrary, the whole of the adipose membrane surrounding the kidneys, "which, in this lady, was loaded with a much larger quantity of fat, than is usually met with," being found in a gangrenous state, there
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can be little doubt, that this was the part first attacked with inflammation; that mortification rapidly ensued, and that then the kidneys, pancreas, and colon, were involved in the disease, from their continuity to this mass of sphacelated fat.

Long continued riding on horse-back, is mentioned as one of the exciting causes of nephritis, by most writers on the subject; and was most probably the exciting cause of this disease, which, in the view I have taken of it, has not hitherto been noticed by any medical author whom I have consulted. The ambiguous nature of its symptoms, its rapid progress, and fatal termination, will entitle it to be ranked among the most formidable of the internal inflammations.

XVIII. *Of Headachs, which arise from a defective Action of the digestive Organs.* By PELHAM WARREN, M. D. F. R. S. Fellow of the Royal College of Physicians, and one of the Physicians of St. George's Hospital.

Read at the COLLEGE, Dec. 2, 1812.

THE symptoms of these headachs vary very much in different individuals, but in all cases some of the following circumstances are present. In general, restlessness precedes the attack, which is followed by uneasiness of the head, and want of the usual distinctness of ideas, oppression of spirits, disinclination and sometimes incapacity for mental exertion, chillness of the body, coldness and dampness of the hands and feet. Next succeeds pain or dull aching of the head, sometimes of the forehead only, at others affecting the crown of the head and posterior part of it, attended with a sensation of coldness and tightness of the scalp, slight giddiness, weight, pain, distension and stiffness

stiffness of the eyeballs. In some cases, as these symptoms increase, they are accompanied by tingling and numbness of the fingers and hand. This numbness is never so severe as entirely to deprive them of feeling; and, as far as I have observed, seldom affects the whole hand at the same time; but usually first attacks one or two of the fingers, and as they recover spreads to a neighbouring finger, and having in this manner traversed the whole hand, extends to the wrist, after which it ceases altogether. The symptom last mentioned is of short duration, seldom continuing more than a quarter of an hour; but it leaves a slight sensation of stiffness, which does not entirely cease until the headach has been relieved by art, or has finished its natural period. As long as it is present the hands are cold and damp, the pulse is languid, but neither quicker nor slower than is natural. In other instances

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instances the headach commences suddenly with a dazzling and mistiness before the eyes, which is described to resemble the defect of vision, which takes place when the eyes have been long employed in reading, or, perhaps more accurately, the sensation which the eyes experience when a cloud has suddenly obscured the daylight. This symptom usually precedes a very severe attack of pain; but the progress of the headach, I believe, is not commonly so rapid as when it commences with the symptoms before described. The dimness of sight is, in some instances, succeeded by the sudden appearance of colours, and of luminous forms; in others, these appearances immediately precede the headach. The colours, which are said to be blue, yellow, red, or green, are of a very brilliant hue; they appear singly and in succession, first in the form of a small circular spot at a distance, whence they approach

proach the eye in a direct line, gradually enlarging in surface and increasing in brilliancy as they advance, until at length they seem to be in contact with the eye, when they instantly expand and vanish, and are succeeded, after a few instants of time, either by a renewal of the same appearance, at a distance, of its original dimensions, or by an appearance of similar form and dimensions, but of a different colour. These coloured forms succeed each other with increased rapidity till they cease altogether. The luminous objects presented to the eye are more various ; sometimes they represent the flame of a lamp, at others they resemble the outline of an irregular fortification ; and, in a few instances, I have known the attack of headach to have been preceded by a luminous appearance, of a curved shape, resembling the blue light of electricity, as it is seen when flowing from the surface and edges of a bent wire.

wire. The object last described, when viewed with closed eyelids, appears at first small, possesses an unsteady vibratory motion, but always preserves the same relative position. The duration of its appearance is uncertain, varying according to the severity of the headach. When about to cease, it enlarges in all its dimensions, the blue is changed for a redder light, its form becomes less clearly defined, and its vibrations are more rapid: at this period it seems to move towards the outer angle of the eye, and becoming fainter and more expanded, gradually disappears, leaving behind some degree of obtuse pain of the head. When the eyelids are open the appearance is less vivid, and is seen floating in the air, interposed between the eye and any object to which the sight may be directed, dilating and contracting in its dimensions according to the remoteness or vicinity of the object looked at. The tongue, in this disorder,

order, is usually covered with a yellowish white fur, and is often very considerably coated with it. The pulse is of the natural frequency, but languid. Nausea is often present, but seldom in so great a degree as to produce vomiting. There is usually flatulency, and a sensation of dryness and inactivity of the bowels. The appetite is seldom impaired, even during the attacks of pain; it is, on the contrary, often preternaturally increased, especially for those sorts of food which are apt to disagree with the stomach. The appearances of the stools vary so much, that a general rule cannot be drawn from them; but, I believe, that in all cases of headach of this description, the stools will be found of an unhealthy quality. The most frequent appearance in them is bile in too large a quantity; sometimes there is bile of various colours, and of different degrees of viscosity; occasionally the evacuation has a natural

tural appearance, but contains portions of undigested food. At other times the stools are of a faint yellow colour, and float upon water, giving out an odour like that of saliva: a very common appearance, especially when there has been great dejection of spirits, is a loose stool, of a dark-greenish brown colour, in smell resembling the grounds of sour beer.

If these headaches be allowed to pursue their natural course, they generally terminate in a few hours; but when they have become habitual, they are often protracted through one, two, or more days. Such are the general symptoms; and when these prevail, the functions of the liver, stomach, and bowels, will be found inactive or improperly exercised.

But besides the headaches depending upon these defects, there is another species of them which seems to arise solely from a faulty action of the stomach. In this form of the disorder, the

the pulse is also languid and feeble, but not more frequent than natural; the tongue is whitish and slightly coated, the edges of it are of a pale red colour. The patient perceives a sensation of mistiness before the eyes, and general indistinctness of vision; he feels a dull pain or weight in the head attended with some confusion, is slightly giddy, and fearful of falling. When on foot he thinks himself insecure unless in company, but if leaning upon the arm of a companion, sitting still, or moving in a carriage, he is free from giddiness or alarm. If desired to walk towards a distant object he is reluctant to make the attempt, from a doubt of his ability to reach it without falling; and with the inconsistency of a person under alarm, will without hesitation proceed to a greater distance than that which has been proposed to him, provided that it be in the direction of his own house, or lead him to any other

other situation where he conceives that he may be within reach of assistance. These symptoms are attended with an uneasiness or irritation of the stomach; a slight nausea, and often by a sensation of constriction of the fauces, accompanied with a watery secretion from the posterior part of the mouth. Coldness, slight stiffness or numbness of the fingers are sometimes present, and the other parts of the system are in general affected with a great degree of nervous sensibility.

Headachs produced by excess, are too well known to be insisted upon here; but they should be borne in mind in the consideration of this disorder, because they are examples of headach arising from a temporary insufficiency of the digestive powers, and therefore bear nearly the same analogy to those of which I am treating, as the acute bear to the chronical forms of disease.

Headachs which arise from congestion of the brain, are distinguished

from those which I have described by the presence of symptoms of plethora, by a full and oppressed pulse, by a difference in the character of the pain, which in the headach arising from fullness of blood, is accompanied with throbbing, and a sense of action in the system which alarms the feelings, while the pain attendant upon the headachs which are the subject of the present essay, is described by patients to be either a dull aching or else a racking pain, often moving from one part of the head to another, and attended with soreness of the scalp. In the first the eyes look red and full, in the second they have a depressed and languid appearance. The distinction is less easily made when for some time there has been general inactivity of the body, and occasional giddiness, attended with a slow accumulation of blood in the brain; but in this case also the state of the pulse, the absence of symptoms of indigestion, the

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age, the general habit and constitution of the patient, sufficiently mark the difference.

Those which arise from internal disorganization of the brain, if pressure has not been produced, are marked by an acute fixed pain, by a quick, irritable, and sometimes irregular pulse; but when pressure has taken place, the pulse is full and slow, but not attended with the steady violent heat which accompanies sudden congestion of blood in the brain.

When headach is caused by chronic disease of the bones of the skull, it is distinguished by the constancy of the pain; which is confined to one spot, whence violent shootings proceed to some fixed point. As the disorder advances, slight symptoms of pressure on the brain ensue; and on examination, a tenderness of the bone is observed.

The nervous headach is distinguished by the absence of constitutional

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disorder, and by the smallness of the space on the surface of the head which the pain occupies.

The disorder which I have described is not peculiar to any age or sex ; but it prevails most with young and middle-aged persons, who are of anxious minds, of a relaxed frame of body, and accustomed to indolent or sedentary habits. This structure of constitution and mode of life are unfavourable to the perfect execution of the digestive functions. The stomach in consequence becomes unequal to its office, the secretion and passage of the bile are slow, irregular, and imperfect, the bowels become costive, the circulation of the blood languid, and the nervous system is rendered too susceptible.

To these errors of digestion both forms of headach may be traced, and upon a short review of some of the immediate consequences of this state of the digestive functions, it will appear

pear that headaches of the second form may with great probability be attributed to a fault in the stomach, and those of the first description to a defective action of the upper bowels.

From the intimate connexion which exists between the nerves of the stomach and the brain, any casual derangement of the digestive process commonly communicates its influence to the head. But when an unhealthy disposition of the digestive organs has taken place and become established, impressions made upon the stomach are sometimes instantaneously transmitted to the brain, and in general with great rapidity. Under such circumstances, the presence of acid in the stomach and the reception of certain kinds of food, are often within a short time followed by headach attended with particular symptoms.

Acid, whether received into the stomach, or generated in that organ by secretion, or in consequence of imperfect

fect digestion, is followed by a tightness round the upper part of the throat, a dull pain and constriction of the forehead and scalp, a slight obscurity of vision and a strained feeling of the eyeballs. Some individuals accustomed to the use of butter at breakfast, have experienced daily a weight and severe pain of the head, preceded by a sudden dimness of sight, and a tightness across the forehead, attended with nausea, which symptoms have been removed for the time by the rejection from the stomach of portions of undigested butter, and have been afterwards entirely prevented by the discontinuance of that article of food. An uneasiness of the stomach, a dull pain and tightness of the forehead and scalp, accompanied by a temporary diminution of the usual freedom of thought and quickness of apprehension sometimes follow the use of infusions of tea and of other astringent vegetables. Salted food, the fat of meat,

meat, fermented liquors, although used in moderation, even bread, milk, vegetables, and many of the mildest and most simple articles of diet are prejudicial to certain individuals, and are followed by headach and the train of symptoms just enumerated. Many other instances of peculiarities of digestion, productive of similar consequences, might be adduced; but they occur so frequently among persons in cultivated life, that further examples of them are unnecessary. Almost every individual, who from the nature of his occupation, or from inclination, has adopted confined and sedentary habits, is capable of affording an instance of some such peculiarity or morbid susceptibility of the digestive organs; and of such individuals there are very few who, at some period of life, have not suffered from headachs of this description.

It is therefore probable, that a sensibility of the nerves of the stomach
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to particular ingesta, and to some of its own secretions, gives cause for headaches of the second description, and that they take place from impressions made upon that organ in the earlier stage of digestion.

But those of the first description seem to occur at a period, when the mass of food which has been prepared in the stomach, is passing or has passed into the duodenum, to receive the influence of the bile, and to undergo the final process by which it is to be converted into nutriment. In support of this opinion it is to be remarked, that in these cases, if vomiting be excited, the contents of the stomach will be found to be very inconsiderable, and the relief obtained will be very imperfect;—that patients do not complain of the stomach as the principal seat of their uneasiness; but if minutely questioned, refer it to the upper bowels, where they feel a sensation of indolence to which they attribute

attribute their sufferings ; and after a very little experience, are aware that some mitigation of the headach will take place as soon as the peristaltic motion of these parts has become quickened, whether naturally or by the assistance of purgative medicines. A slight attention to the course of this disorder, will show that it is not produced by general fulness of the large bowels, and that the offending cause operates upon a very limited portion of the intestinal canal ; for these headachs are always relieved, as soon as the upper part of the intestines is put in motion by an active purge, and are often completely carried off by it before any evacuation of the bowels has taken place.

Hence the origin of both these forms of headach may be traced, either to a morbid susceptibility and inactivity of the stomach and upper bowels, to imperfect or vitiated secretions in those organs, or to a general

neral insufficiency of the digestive powers ; to imperfection either in the quantity or quality of the secretion of the liver, or to a tardiness and irregularity in the passage of the bile into the duodenum.

These causes probably co-operate in the chronical forms of this disorder ; for if by the first process of digestion which takes place in the stomach, the food be imperfectly prepared, it is reasonable to conclude that the second process, which is performed by the duodenum, with the assistance of the bile, will partake of this imperfection, and that the natural separation of the excrementitious particles of food from those which supply nourishment, will be insufficiently or at least tardily accomplished. Hence portions of undigested or imperfectly digested food will be detained in the upper bowels, which by disturbing their secretion and other actions, and by calling upon them for a degree of exertion

ertion which is not natural, gradually exhaust their power, and reduce them to an inactive state.

Upon the whole, that form of head-ach which is attended more with confusion than pain, and in which there is a temporary dimness of sight, appears to depend chiefly upon a defective action or secretion of the stomach; the other, which is the most prevalent form, more particularly upon inactivity of the upper bowels, from whatever cause it may be produced, and an imperfection of that part of the process of digestion in which the bile is concerned; but in the majority of instances, the whole of the digestive functions appear to be more or less implicated.

I do not mean to assert, that if the digestive powers be faulty, headaches will invariably follow; to all such general propositions in physic there must be exceptions; but it has been my endeavour to prove, that they are al-
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ways preceded by a derangement of the digestive functions, and that they are the effect of an improper action in the organs upon which these functions depend. Much may be attributable to the duration of this derangement, and to peculiarities of constitution; and it is probably necessary that a previous condition of debility of the digestive organs, a natural or acquired delicacy of their nerves, which may not equally occur to all individuals, should for some time have prevailed, before the interruption of the different stages of digestion can become capable of producing headaches.

In the treatment of headaches of the first description, the following practice should be adopted:—When a headach is forming or already formed, a purgative ought immediately to be given; and that should be preferred which has been found to act most speedily upon the stomach and upper bowels

bowels of the individual who is the subject of the attack ; and the dose of it should be repeated every half hour or oftener, till some mitigation of the pain in the head and mistiness of the sight takes place, or a disposition to action is perceived in the upper bowels. It will be found, that as this disposition is increased, and the contents of the upper bowels are carried forward in the course of the intestinal canal, the affection of the head will be diminished ; that the luminous objects floating before the eyes will disappear, and that no trace of the disorder will remain except soreness and tightness of the scalp. The symptoms yield sometimes before an evacuation of the bowels has been procured, sometimes after a slight motion, and in almost every instance before the complete operation of the purgative. The degree of activity with which this system is to be pursued, must be regulated by the constitution of

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of the patient; but however vigorously purgatives may be administered, they will be found harmless, provided they be not carried further than is necessary for the removal of the offending cause; and they will be found, instead of weakening the patient, to add to the vigour of his constitution, by relieving it from an oppression under which its healthy action had been materially impeded. Independent of these considerations, a speedy termination of the attack of headach is of great importance; for besides the advantage of immediate relief, the disposition of the headach to return will be found proportionate to the period of its duration.

If acidity be present, magnesia is the best and most expeditious purgative. This combined with rhubarb; the saline purgatives dissolved in mint, peppermint, or any other cordial water; and in general those aperient medicines, which operate mildly and quickly,

quickly, are to be preferred. When the stomach and bowels are cold and sluggish, the compound extract of coloquintida, or other compound purgative formulæ, combined with aromatic powders, will be found convenient. Upon the whole, it is not very material what purgative is made use of provided it *act* expeditiously. Calomel is objectionable, both on account of the slowness of its operation, and because the mercurial influence which it exercises independent of its purgative property, is not requisite to the removal of the headach, and is sometimes prejudicial; but it may occasionally be used with advantage in the intervals of the attacks.

A variety of domestic remedies have been devised for the relief of this disorder; among which cordials, wine, and condiments of various kinds deserve to be noticed, on account of their occasional success. A glass of brandy will sometimes put off one of these attacks.

attacks. Wine and a full meal of spiced food often afford relief; but as soon as the influence of these stimuli has ceased, the headach usually returns with increased violence. A repetition of these remedies occasions a further truce, and if by accident or by art the bowels should during the interval become relieved, the attack is sometimes effectually repelled. This method is very inexpedient, and by no means to be recommended; for the occasional relief is greatly overbalanced by the consequent suffering. Of the other remedies of this sort it will be sufficient to observe that they usually contain ingredients which act upon the bowels, and that the credit which they have acquired is due to their laxative quality.

Emetics are of little use, unless they be violent, or so contrived as to purge the upper bowels. This fact is consonant with the reasoning before adduced; for if the headach take
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place at a period when the greater portion of the mass of food has passed from the stomach into the duodenum, and the remainder of it is far advanced in the same course, it is evident that the relief obtained by merely emptying the stomach can only be partial. Vomiting seems better adapted to headaches of the second description, and, if early excited, completely removes the pain and the other attendant symptoms. When this method proves successful, an acid liquid is usually thrown up, and commonly food also, which has not undergone any alteration. In these cases, however, it is probably more adviseable to rely upon the effects of purging, unless a sensation of weight upon the stomach should peculiarly point out the propriety of an emetic. Besides, the relief from emetics is only temporary, and by the repetition of them great violence is offered to the digestive organs. The stomach, as it

were, relying upon them for assistance, becomes less active in propelling the food in its natural course, and a disposition to an inverted action of the bowels takes place, by which portions of bile are carried into the stomach. On the contrary, by the use of purgatives, the excretion of the bile is constantly solicited and directed in its natural course, the stomach and bowels by degrees recover their natural propulsatory action, and are gradually enabled to perform that function without the assistance of medicine. And it should be recollected, that these headaches naturally relieve themselves by the bowels, and that whatever impedes the action of the intestinal canal promotes their return.

To prevent a recurrence of the disorder, attention must be paid to diet and regimen. The variableness of the digestive power in the same and in different individuals, makes it necessary

sary to rely in a great degree upon the experience of the patient, for the regulation of his diet. No very accurate rule can be laid down ; because each stomach has its own peculiarity. The patient should therefore be directed to observe whether his headachs prevail more frequently after the use of one sort of food than another, and to reject that which appears to have been prejudicial. In judging of which he may be assisted by the following remarks. In general butter, the fat of meat, pye-crust, bacon, and other greasy substances, dried and salted meats, nuts, acids, and those sorts of food which readily take on an acid fermentation are to be avoided. The use of wine and of other fermented liquors should be very much limited, and in some instances entirely discontinued. Many of these articles however may prove harmless to certain individuals although they are hurtful to the majority of persons ;

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and besides these there are probably many other sorts of food which though they may commonly agree with the stomach, will in peculiar constitutions, or under particular circumstances, furnish a cause for headach. The directions for regimen admit of more precision. Air and regular exercise, particularly on horseback, are indispensable: early hours and the moderate habits which they induce, should be encouraged: the direct rays of the sun and the confined air of heated rooms ought to be avoided: the skin should be kept warm and rather disposed to perspiration; the feet should be protected by warm clothing, and carefully preserved from moisture or wet. Whenever any considerable perspiration may have been induced by exercise, the skin should be wiped dry and the clothes next to it should be changed; but these precautions are insufficient, unless the inactivity of the stomach and bowels

be daily overcome by the use of laxative medicines. In this disorder the digestive organs are always competent to the conversion of a sufficient quantity of food into nutriment, although unequal to the perfect preparation of all that may be required to satisfy the craving of the stomach; but they are so easily disturbed by slight causes and act with so little uniformity, that even under an abstinent and exact regimen some portions of food escape unchanged, and unless their accumulation be prevented the disorder is reproduced. It is therefore necessary to give to the stomach and upper bowels, by the stimulus of a purgative, that propulsatory action by which in their ordinary state they are enabled to pass off those portions of food which have not been digested. It is obvious that it must be immaterial, when the power of digestion is sufficient for the nutriment of
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the body, whether the whole food received into the stomach be or be not digested, provided the undigested portions of it be not allowed to excite any disturbance in the system ; and it is equally clear that, the removal of those portions of food which have not undergone the digestive process is accomplished more in conformity with the natural actions by laxative medicines than by any other method. Two modes of applying the remedy present themselves, viz. either to mix the purgative with the food by taking it at the period of the principal meal, or to administer it some hours afterwards, at the time when the digestive process is nearly completed.—By the former method, it is proposed to give an action to the stomach, at the moment when it is called upon to exercise the digestive office : by the latter, to permit the stomach to pursue its course according to its ability, and to

to provide against any impediment which may occur in the advanced stage of digestion.

When the disposition to headach has not been early counteracted, an exact compliance with the rules proposed for the diet, and for the regulation of the bowels, will not in every case prevent an occasional return of the disorder. But the approach of an attack is generally denoted by some previous symptom, and may be anticipated by the timely application of purgatives. Some accurate observers, who have traced the cause of their headachs to particular ingesta, have discovered that the attack has taken place on some occasions within a few hours ; and at other times, not till the third day after these ingesta have been received into the stomach. The attacks however observe no settled period ; and although they generally give some notice of their approach, they are often so sudden, that the

the patient should always be prepared for their recurrence. On this account, it is necessary that the purgative medicine to be administered should be made up in pills, or in some other easily portable form ; and the patient should be instructed how to apportion the dose to the exigency of his situation. By diligently observing these regulations, headaches of this form will always be greatly relieved ; and by a perseverance in this system, the disposition to them will, in the majority of instances, be entirely removed.

Bitter and other tonic medicines will be found of little service, until the natural habit of evacuation has been in great measure restored. Weak preparations of steel combined with purgatives, a course of chalybeate waters, and tepid bathing, are useful in removing the relics of the disorder ; but will rarely be found admissible, till the violence and frequency of the attacks

attacks have been for some time abated.

Headachs of the second description, or those which I have attributed chiefly to a disordered state of the stomach, require a less active treatment. In these cases the purgative should be just sufficient to prevent the stomach from retaining such portions of food as may escape the full action of digestion. For this purpose a few grains of rhubarb, two or three grains of the compound extract of coloquintida, a grain of Socotrine aloes, or any other convenient purgative, may be administered daily, either before dinner, or at any time when the individual has notice from his own feelings that the inconvenience experienced in the stomach is likely to proceed so far as to occasion headach.

This treatment will be sufficient for the relief of the severer symptoms as they arise ; but a permanent cure of
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the disorder is only to be accomplished by the removal of the causes of defective digestion, which are either a disordered secretion of the glands of the stomach, a morbid susceptibility of its nerves, or weakness. The disordered secretion of the stomach, and the susceptibility of its nerves, may be relieved by small doses of the compound powder of Ipecacuan, by the various preparations of opium, and of the other narcotic vegetables, which should be combined with a solution of pure potash, or mixed with pure magnesia, if acid be present in the stomach. The doses of these remedies should be apportioned according to the judgment of the practitioner, and so arranged as to retain the stomach constantly, but gently, under their influence, without arresting the action of the bowels. To produce an adequate effect from the solution of pure potash, the dose should exceed

exceed twenty drops, and the quantity of magnesia must only be limited by the acid required to be neutralised. The power of opiates in checking imperfect secretions is very considerable; and by a continuance of the restraint which they put upon the glands of the stomach, the secretory function reassumes a healthy action. The digestion is more readily restored by the use of gentle stimulants than by tonics; for the stomach is in general so delicate, that bitter and astringent medicines produce in it a sensation of tightness and fulness, a tendency to costiveness, and great irritation, which frequently spreads over the whole frame of the body. If tonic medicines be deemed necessary, they should be mixed with gentle aperients. Weak infusions of quassia, of camomile flowers, of Cascarilla bark, of gentian root, or the extracts of these bitters, in which form they are more grateful to the stomach, combined

combined with a purgative, will be sufficient for this purpose. The stomach, in these cases, will rarely admit of the use of steel or zinc ; but in many instances will receive benefit from the use of the mineral acids. Spice, either in the form of medicine, or mixed with the food, gum ammoniac, sagapenum, small doses of assafœtida, myrrh, and other remedies which belong to this class, are the best stimulants. The regimen should be conducted upon the plan laid down above, and the diet so managed, that the action of the digestive power should be frequently and gently solicited by small portions of food, and promoted by small quantities of wine and spice. As long as the stomach is employed without exertion, the symptoms of headachs of this form will be suspended. Whether food effects this by enveloping some secretions of the stomach which occasion irritation, whether by the comfort it
affords

affords to its nerves, or by promoting the contraction of its muscular fibres, must be uncertain ; but this mode of gently cultivating the digestive power by a cautious administration of food, will, I apprehend, be found of equal, if not of superior efficacy to medicine.

When the symptoms of headach indicate that the whole of the digestive functions are faulty, the two methods of cure just described should be applied according to the peculiarity of the case. It is unnecessary to point out the exact mode which should be observed ; for it follows naturally from the rules which have been already laid down. But it may be worth while to remark, that no effectual assistance can be afforded to the stomach until the upper bowels have recovered so much of their natural activity as to permit a free and uninterrupted passage of the mass of food which is to be converted into nutriment, or until the organs which are concerned with
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them in the advanced process of digestion have begun to secrete healthy fluids, and to evacuate them with regularity. The treatment must, therefore, be commenced by the purgative system recommended for headaches of the first description, and followed by the method of cure proposed for headaches of the second form.

XIX. *Upon a Strong Pulsation of the Aorta, in the Epigastric Region.* By MATTHEW BAILLIE, M.D. F.R.S. *Fellow of the Royal College of Physicians, &c.*

Read at the COLLEGE, Dec. 2, 1812.

It has frequently occurred to me to have been consulted, within the last fifteen years, respecting a pulsation, which is distinctly to be felt in the epigastric region. When the patient first discovers this pulsation, he is generally greatly alarmed at it; and has seldom found much comfort from the opinion which has been given him by his medical attendant concerning its nature. From a good deal of experience upon this subject, I am enabled to say, that the increased pulsation of the aorta in the epigastric region very rarely depends upon any disease of the aorta itself, or of its large branches in that place; and that this occurrence is almost constantly of very little importance.

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In the whole course of my medical experience, I recollect but one instance in which this pulsation depended upon an aneurismal swelling of the artery.

This symptom, or complaint, is more apt to take place at the middle period of life than at any other; but I have known one or two instances of it in persons about the age of 30. It occurs both in men and women, but more commonly in the former than in the latter. In one individual the pulsation is much more strongly marked than in another; and in the same individual it varies a good deal in its strength at different times. In some instances the pulsation is more strongly to be felt in the evening than in the forenoon. It is generally more distinctly to be felt when the patient is in the horizontal posture; and sometimes the pulsation is so strong as to be visible to the eye, even at some distance, when the surface

face of the epigastric region is exposed to view. In some instances the boundary of the artery, while it pulsates, can be very distinctly felt, and it may even occasionally be traced nearly as low as the navel. I do not recollect that there is any peculiarity in the pulse of persons affected with this complaint. It is commonly neither intermittent, nor remarkable either for frequency, strength, or weakness. I have had two opportunities of examining the state of the arteries in the epigastric region, after death, in persons who had this pulsation very strongly marked, and who had died from other diseases. The one person died from an ulcer in the stomach; and the other from a very long typhus fever, where the stomach was sound. In both cases the aorta itself, the branches of the cœliac artery, and the superior mesenteric artery, were perfectly free from all appearance of diseased structure. The arterial system,

tem, in these two cases, was not more extensively examined ; but there was no reason to believe that any part of it was diseased.

It is perhaps difficult to ascertain, in many instances, the causes of this increased pulsation of the aorta in the epigastric region ; but in most cases it will be found to be connected with an imperfect digestion, and an irritable constitution. When it has once taken place, it seldom, I believe, subsides entirely, although it will vary in its degree at different times. It produces, however, not much inconvenience, more especially where the mind has ceased being anxious about it ; and a person may continue to live with this symptom, or complaint, just as long as if it did not exist.—Some years ago I was consulted by an old man concerning a slight paralytic affection ; and when the conversation respecting that part of his complaints was finished, he spoke to me about a
puls-

pulsation in the epigastric region. It was most distinctly to be felt; and he told me, that on account of this pulsation he had consulted Sir Cæsar Hawkins, Mr. Bromfield, and Dr. Hunter, about twenty-five years before the time of his consulting me. Sir Cæsar Hawkins and Mr. Bromfield, he said, told him that it was an aneurism of the aorta; and Dr. Hunter told him, that he did not know what it was. Dr. Hunter saw enough of peculiarity in this case to make him doubt, but not enough to enable him to decide that there was no disease in the aorta.

This case shews that a person may continue to live for many years with a strong pulsation of the aorta in the epigastric region; and from the appearance of the patient, his general health seemed to have been very little impaired by it.

It would be a matter of considerable importance, if we could at all

times certainly distinguish between the pulsation of the aorta about which we are now treating, and that which is occasioned by an aneurism of the aorta in the epigastric region. This, however, will in some instances be hardly possible, more especially in the early periods of aneurism. When the boundaries of the artery can be felt distinctly, and the artery can be ascertained to be of the usual size, it is clear that, notwithstanding the force of the pulsation, the disease is not aneurism.—When a round circumscribed tumor pulsates against the fingers applied to the epigastric region, there can then be little doubt that the disease is aneurism either of the aorta or of the cœliac artery. When the pulsation has continued for several years without the health being materially impaired, even if the boundaries of the artery should not be distinctly felt, yet there is the strongest reason to believe that the pulsation of the

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the artery does not depend upon an aneurismal swelling in it.

I am not acquainted with any means of curing this symptom, or complaint. Whatever improves the digestion, and renders the constitution less irritable, will be of use in mitigating the increased pulsation; and, above all other circumstances, it is useful to remove the patient's anxiety on the subject, when it can fairly be done.

I have thought it of some importance to communicate, through the Transactions of the College, my experience respecting this complaint, as it may tend, in many instances, to relieve the anxiety of the patient, and even sometimes of his medical attendant. It may likewise, in time, lead to a successful treatment of the disease, with which the increased pulsation of the aorta in the epigastric region is connected.

XX. *Observations on certain Symptoms, usually, but not always, denoting Angina Pectoris. By J. LATHAM, M.D. F.R.S. Fellow of the Royal College of Physicians, &c.*

Read at the COLLEGE, Dec. 11, 1812.

IN a former paper, which I had the honour of presenting to the College, I remarked upon some cases of abdominal enlargements, which are occasionally mistaken for those of the liver. In this I hope to shew, that some symptoms resembling those of angina, and which seem to indicate affections of the thorax, are in reality occasioned by disease seated in the abdomen; and that the methods of treatment, in consequence of reasoning from false data, have been erroneous.

I think it necessary for me to premise, that this *angina notha*, as I wish to term it, depending upon the operation of causes out of the thorax,
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may, if neglected, become at last the true angina pectoris ; and that, although the thoracic viscera are not at first organically diseased, yet that the abdominal enlargements may, by a constant disturbance of the pulmonary circulation, so influence the action of the heart and lungs, that these may ultimately have their organization altered, and consequently become truly diseased also : a consideration of such importance, as should induce us to employ all our energies for the discovery and removal of the primary complaint, before it creates that condition which we know to be incurable.

When respiration is performed with difficulty, but more easily in an upright position of the body, and when the pulse beats either unusually slow, or with unusual rapidity, and when the pulsations are unequal, irregular, or intermittent ; when the extremities are cold, and the countenance of a bluish or purplish colour ; practitioners

tioners have not only generally concluded that the disease is *angina pectoris*, but that it must necessarily arise either from water effused within the chest, or from diseased organization of the lungs, mediastinum, heart, pericardium, coronary arteries, or the larger blood-vessels. But when, after various changes in the disease, and a tedious fluctuation in the symptoms, producing alternate hope and disappointment, the patient at last suddenly dies; and when, upon examination of the body, nothing like water, or variation from healthy and natural structure is discoverable within the thorax, but tumor as well as water is found in the abdomen, the physician will certainly conclude that the cause must necessarily have existed where the preternatural appearances are observed; for he knows, that whatever presses upon the descending aorta, or forces the diaphragm from its usual situation upwards on the lungs, will
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thence as certainly occasion all the inconveniences of angina pectoris, (although indirectly so) as if the organs of respiration and of circulation had been primarily and actually diseased themselves.

It is not to be denied, that tumor, under either of these circumstances, will ultimately lay the foundation of dropsy; and that water formed in the thorax, as also in the abdomen, will occasion a laborious respiration, as well as an impeded and oppressed action of the heart; but it is previous to this termination, and while the symptoms are as yet only in the outset of their career, that a physician ought carefully to investigate, and try to discriminate, the causes which are then insidiously advancing towards irreparable mischief.

When a patient complains of a slight difficulty in respiration, increased by exercise, and aggravated by a recumbent posture; if the pulse does
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not beat with intermissions, and the several strokes are not unequal in force, although the pulsations may be preternaturally slow, or on the contrary, more than usually quick, I know, from actual examination after death under these different circumstances, that there sometimes is not any organic disease in the thorax.

If respiration be uneasy, and the patient, at first experiencing some difficulty in lying down, shall in a little while so adjust his position as to sleep comfortably, I believe there cannot be any organic mischief in the thorax, although possibly there may be effusion.

If the patient cannot sleep in a recumbent posture, or when asleep, if, sliding down gradually into his bed, he is suddenly awaked with a sense of spasmodic stricture and strangulation, provided there hath not been previously observed an irregular and an intermittent pulse, I should suspect

pect effusion within the chest, rather than any disease of structure.

And if, in addition to the above circumstances, there should be anasarca swellings of the legs, and the countenance should be bloated and purple-coloured, the chest is certainly labouring under an effusion of fluid; but even then it is not absolutely clear that hydrothorax is actually produced by mal-organization in the thoracic viscera.

All these conditions of the disease I suppose to be remediable; they more frequently arise from an indurated liver than from any other cause; and if this induration can be cured, those conditions dependent upon it may be cured also. The enlargements of the spleen and of the mesenteric glands rank perhaps the next in frequency to those of the liver; but pancreatic and other morbid tumors in the abdomen, which I suppose may produce similar affections of the thorax, as
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they are relieved with more difficulty, so are they fortunately the least frequent.

The observations which I have thus made may be considered, I hope, as forming some practical distinctions consolatory to the patient, and encouraging to the physician: for if, by early attentions to our patient, we discover that pressure from any abdominal enlargement may indirectly be the cause of the symptoms which distress him, we shall attempt the cure with better expectations, than if we were to consider the disease as arising from organic mischief seated immediately within the thorax itself.

I cannot presume to think that I can beneficially add any thing to that which is already well known in the treatment of this disease: Mercury, I suppose, in any of its several forms of preparation which may be best suited, according to the judgment of the practitioner, to the circumstances of the

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the case, will be strenuously employed, until a full deobstruent effect may be produced. Other means will of course also be sedulously used, as the physician may think proper and advisable: nor will he omit to recommend to those who have the ability of following his direction, when the disease shall have been diminished by the methods just mentioned, a regular course of the waters either at Cheltenham or at Lymington—and afterwards, probably, of those of Bath. Some such plan as this, in the earlier stages of the disease, will generally restore the patient to health and activity again; but if the nature of the disease be not discovered until impaired digestion, jaundiced countenance, clayey stools, and œdematous extremities more distinctly characterize it, a cure however earnestly sought for, is not often obtained.

Having stated thus much concerning what I have termed the remedi-
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diabie conditions of the disease, allow me to observe, that where morbid organization of the thorax is actually and evidently present, nothing can effect a cure. But must nothing be attempted with a view to alleviation? Must every deplorable circumstance, each of itself sufficient to cause or constitute the true angina pectoris, be therefore utterly neglected? Must the aneurismal swelling be carelessly left to expand itself? Must ossification of the heart and its valves, or adhesion of the heart to its capsule, cramping, embarrassing, and confounding its pulsations, remain unheeded? Must habitual obstruction in the lungs, or their condensed and consolidated texture, never be attended to, or the insidious progress of tubercle never be watched or regarded? We may answer, that the more distressing any case shall be, the more earnest ought we to be in our investigation; and although the result may be such as to
render

render it presumptuous in us to expect a cure of the disease, yet it should never prevent us from attempting its alleviation: nay, even the kind offices of a friendly physician will often sooth where his art has absolutely failed him. Let squills, ammoniacum, assa-fœtida, camphor, æther, conium, digitalis, opium, singly or conjointly with any other remedies of regular practice, be given, as the occasion may require, in those cases where alleviation is only to be expected; but in those other cases of angina pectoris which I have considered to be sometimes curable, let us not suffer the early opportunity to escape us, but direct our remedies at once to the seat and cause of the disease boldly, using mercury, and employing all other appropriate means that may promise relief.

I shall briefly state the following cases in confirmation of the observations above advanced: The first was
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that of a clergyman of the University of Oxford, and Fellow of Merton College, who had frequently laboured under angina pectoris, and had as often been relieved: the symptoms always returned after short intervals, and the common diuretic and purgative plans always removed them. In the absence of Dr. Pitcairn, who was then at Lisbon for the recovery of his health, I was occasionally employed by the family of this gentleman, and he himself also became my patient. Although he was speedily relieved, the symptoms as usual soon returned; and thence concluding, that as the symptoms were not constant, there could not be permanent mischief connected with diseased organization within the thorax, I very minutely examined the abdomen and its several secretions; and having good reason to believe the liver to be in fault, I pushed on the mercurial plan so as to produce a slight ptyalism. The unfavourable circumstances,

stances, as usual, soon disappeared; and after enjoying more ease and comfort for a much longer interval than was common with him, I gave him permission to remove from London to his brother's residence in the country, and took my leave of him. On the following morning, as he was preparing for his journey, and bustling a little that he might not keep the carriage waiting, he suddenly fell down and expired.

The body was examined; and on meeting Dr. Pitcairn, I put the question as to what he conceived might have been the result of the examination. He replied, "You would find organic disease either of the heart or of the larger vessels certainly." His surprise was great when I informed him that there was no disease discoverable throughout the body, except an enlargement of the liver, which was thought to be harder than natural, and which appeared to be pushing

against the diaphragm, so as to form as it were a sort of recess within it, and in such a manner as to diminish the area of the lungs, and consequently impede the thoracic circulation.

Another case was that of a merchant in the city, whose pulse, though always remarkably slow, was never otherwise irregular; for during my attendance upon him, which was occasionally during ten or twelve years, I never discovered any intermission. His pulse, when he considered himself well, seldom exceeded 32 beats in a minute; but in his paroxysms of disease, if the application of such a term is allowable, the number was usually 22; and once I counted only 17 strokes. The pulsations might be considered as so many heavy undulations, affording, as it were, a chasm in space as well as time between each; and during which interval the muscles of the abdomen and thorax

thorax were so visibly affected as to remain in a state of tremulous or vibratory motion, which gradually diminished until the next wave or swell was succeeded by another similar vibration. I once attended him through a regular fever, when his pulse was not more than 60, notwithstanding the disease ran on for at least a fortnight with hot and dry skin, white and furred and parched tongue, and occasional delirium. This gentleman was considered by almost every physician who saw him as labouring under organic mischief in the thorax; and some thought that the brain was the primary seat of the disease, because, as it should seem, the slowness of the stream sometimes produced fullness and consequent headach. The mischief, however, appeared to be almost entirely in the liver; for upon a gentle salivation, long continued, he attained a state of comfort comparatively great, and for many months after-

wards was almost free from disease. Cheltenham and Bath were successively resorted to for the benefit of the waters; but the enlargement of the liver, with its constant pressure against the diaphragm as the primary cause, had in this, as in the before-mentioned case, produced all the other secondary effects, and so disturbed the functions of the lungs and the circulation through them, that one day, when in complete health, as he then considered himself, he dropped down in the street and expired.

I might add several other cases which, from time to time, have come under my consideration, the subjects of some of which, with care, are now living in tolerable comfort, and some suppose themselves well. The majority, however, of them, it must be confessed, exist but as invalids; but this I attribute to so much mischief having been done before the precise nature of the disease was discovered, that,

that, although relieved, perfect ease and security cannot be obtained for them, the certain consequences of prior suffering still existing, and continuing to operate as constant causes of renewable distress and danger.

XXI. *On the Discrimination of Chronic Rheumatism, from Gout, Acute Rheumatism, Scrophula, Nodosity, White Swelling, and other painful Diseases of the Joints and Muscles.* By JOHN HAYGARTH, M.D. F.R.S. and F.R.S. Edinburgh. Communicated by Sir LUCAS PEPYS, Bart. Fellow of the Royal College of Physicians, &c. &c.

Read at the COLLEGE, December 22, 1812.

To distinguish similar diseases from each other with accuracy and precision, is a branch of medical knowledge sometimes of much difficulty, and always of great importance. This purpose may be best accomplished when the cases of a considerable number of patients are taken into consideration at the same time. By such an opportunity of comparison the shades by which they differ from each other may be more clearly ascertained and more accurately distinguished.

From general recollection, I lately began to entertain doubts whether the Chronic Rheumatism ever occasioned

any tumor of the affected parts. To determine this interesting question, I made an accurate survey of all the cases which I had classed under this genus in 1801, amounting to 300, which had been then separated from 10,549 clinical histories of patients in the middle and higher ranks of life. In the *Clinical History of Diseases* (p. 15.), I took notice, that out of 470 cases of rheumatism, only 170 had the rheumatic fever. Consequently there remained 300 patients ill of the chronic rheumatism. These are the cases which are considered in the present disquisition.

Out of the whole number, only fourteen patients were noted with any swelling in the seat of the disorder ; and it appeared, upon a more careful and deliberate investigation, that all these fourteen cases ought to have been classed under other genera.

I found that three of these cases were pain and swelling of the face.

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It is generally known that such complaints most commonly proceed from a carious tooth, which is a disease manifestly different from rheumatism.

In two of the cases, the seat of the tumor was in the female mamma, which being neither a muscle nor a joint, the pain cannot be with certainty denominated rheumatism. There are several other more manifest causes of pain and tumor in this gland.

In three cases, on a more careful inquiry, the disease appeared to be nodosity of the joints, though the subject of one of these cases was a man.

Two other cases ought to have been denominated acute rather than chronic rheumatism. Considering that the former is often succeeded by the latter disease, the medical reader will clearly discern the difficulty of determining the exact termination of the acute and the commencement of the chronic rheumatism.

One case appeared more like gout than rheumatism; another was so slightly described as to afford no information which could determine what was the disorder.

Lastly, in two of these clinical histories classed as chronic rheumatism, the patient had a swelling of the knee. The symptoms of one of these patients are briefly stated to be "a pain of the loins, a pain and swelling of the knee. Extract of cicuta and opium, with a laxative pill," were the remedies ordered.

The other patient was a nobleman who had caught a cold seventeen years ago by lying in a damp bed at Poitiers in France. He had ever since that period been affected with a tumor in each knee, which increased or diminished in some degree alternately with a disorder of his stomach. Neither of these cases can be decisively and exclusively denominated chronic rheumatism. With full as much propriety the

the latter might be classed as a white swelling or nodosity of the joints, or gout. The most skilful physicians and surgeons would doubt and disagree as to which of these, or to what other genera it ought to be referred. Though more like chronic rheumatism than any other, yet with the uncertainty here stated, it will not be thought a clear exception to the proposed criterion how to discriminate this from other painful diseases of the joints and muscles.

This nobleman was also a patient of Sir Lucas Pepys; so that fortunately the College may have an opportunity to receive the evidence, and be guided by the judgment of their President concerning the most doubtful of all the fourteen cases.

In this manner I have stated to the reader the whole evidence. Upon a fair and impartial survey of all the cases where tumor is noted, it appears that none of them could manifestly

festly belong to chronic rheumatism. The symptoms of some diseases so nearly resemble each other, that it is often very difficult to determine what name should be given to certain cases. During the labour and fatigue of classing several thousand patients, the candid reader will easily understand the reason why, in the first general arrangement, a few cases are placed under one genus, when on deliberate consideration they appear more properly to belong to another.

Since all the doubtful cases have thus been, without any reserve or partiality, submitted to the reader's consideration ; and since I find that no intimation whatever is given of tumor in the remaining 286 histories of chronic rheumatism which I have recorded, are we not warranted in the conclusion that such a symptom appertains not to the disease ?

I have already endeavoured to describe a disorder of the joints, which has
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been sometimes called gout, sometimes rheumatism, and sometimes rheumatic gout, but which appeared to be so essentially different from either disease, that I ventured to give it another denomination. Does not the whole tenor of this investigation clearly prove how justly and beneficially the *nodosity of the joints* may be classed as a peculiar disease? All the 300 histories above stated had been separated from nodosity of the joints, and classed as chronic rheumatism, five years before I suspected that absence of tumor was a criterion of this disease. No such criterion of it could have been proposed till these three diseases had been distinguished and separated from each other. To some readers these disquisitions will appear dry and uninteresting; but it is on the discrimination of these nice points that superior professional knowledge is chiefly valuable; as it leads to the most important practical conclusions in the choice

choice of remedies which ought to be administered to a patient. It is manifest that all improvements in the accuracy of nosology would essentially and greatly increase the benefit which medical science confers upon mankind.

If it shall be confirmed by future observations, that the pain of chronic rheumatism is not accompanied with any tumor of the morbid part, this circumstance will clearly distinguish it from acute rheumatism, gout, scrophula, nodosity and white swelling of the joints. May we not in this manner remove very serious and pernicious doubts in regard to the most appropriate remedies of these maladies?

It may however be proper to observe, that the absence of tumor cannot be assumed as a criterion to distinguish this from all other pains. I have attentively examined the symptoms of twelve clinical histories of the

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Trismus dolorificus, in order to ascertain this circumstance in regard to it. There was in only one of them any notice of swelling, which was seated in the jaw, and might probably proceed from a carious tooth.

The numerous cases of chronic rheumatism which are daily visited by competent judges of the question, will soon correct any mistake which an individual may have committed. The assistance of my medical brethren is requested on this occasion, not as opponents but as coadjutors to elucidate this nosological question. Objections and exceptions will be respectfully considered if they proceed from clinical knowledge and practical experience. This disquisition has been dictated by no ambition to propose a new opinion, but to discover the truth.

Soon after I had brought these remarks to this conclusion the following
case

case occurred, which clearly proved what useful practical knowledge had been in this manner obtained.

On the 3d of July 1806, Dr. Stewart desired to consult with me on the case of Governor B——. He was 75 years of age. For two days he had suffered a most violent pain in the left side of the thorax, exactly in the region of the heart. His pulse was irregular to an uncommon degree, but beat about 120 in a minute as near as could be reckoned. The extreme anguish he suffered occasioned profuse sweats. The disease was manifestly an inflammation of the heart, and consequently attended with the most imminent danger. It became a point of nice and highly important investigation to determine what was the nature of this inflammation. In our consultation, this question was very deliberately and candidly considered.

We were informed that for six weeks
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our patient had complained of a pain of his wrists and knee, accompanied with a *swelling* of these joints, particularly the former, which had considerably abated previous to the commencement of the dangerous symptoms above described. The point at issue was, whether the disease which had apparently been translated from the wrists and knee to the heart, was gout or rheumatism? To Dr. Stewart I fully explained what conclusion I had drawn by induction from the facts related in the former part of this paper. We entirely agreed in opinion that the disease was *carditis arthritica*.

The brother and sister of our patient had been afflicted with gout; but he had himself only suffered one fit, twenty-five years ago, (in 1781) when an officer of the army, in America. He was of a full habit, and had lived freely, but not intemperately.

In our consultation, this nice and
difficult

difficult point being thus previously agreed upon to our mutual conviction, our next consideration was, what remedies could most effectually preserve our patient from the imminent danger of instant death, by the violent inflammation of such a vital organ. I then asked, "Is it necessary and safe to take some blood from a vein even though the gout be the cause of this inflammation? If there were no such suspicion, the violence of the disorder would require large and repeated venesections. However, let us venture to take a moderate quantity, as seven ounces of blood, and be then guided in our proceedings by the effect which this evacuation may produce."

The loss of so small a quantity of blood was immediately succeeded by sickness, prostration of strength, depression of spirits, cold extremities, and faintness, approaching to syncope. The blood had a partially in-

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flamed crust. This operation was performed in the evening, and a blister was then applied to the pained part of the thorax. During the night, the pain increased to such a degree, that the patient himself, with earnest anxiety, demanded to be bled again, and twelve ounces were taken. Similar symptoms immediately succeeded of sickness, loss of strength, depression of spirits, cold extremities, and faintness, approaching to syncope.

Two sinapisms were applied to his wrists the next morning. The effect was very speedy. In a few minutes they produced the acutest pain, of which he loudly complained. In half an hour they were taken off, having become quite intolerable. The disorder of the heart was soon and considerably relieved. The wrists became immediately very painful and much swelled.

Other symptoms soon afterwards occurred to confirm the opinion, that the disorder of the heart had been

produced by retrocession of the gout. The sediment of the urine was of a deep red colour, and gave a pink stain to the vessel, on the 7th, 8th, and 9th of July, at which time he had acute pain and considerable tumor of his wrists, with a similar, though more moderate, affection of one knee. The alarming symptoms then gradually abating, I took leave of my patient, as it appeared probable that health would be soon and perfectly restored.

In about ten days (July 21st) I was again desired by Dr. Stewart to visit Governor B——. After another retrocession of the pain and tumor of the wrists, &c. a violent pain had attacked his right hypochondre, which considerably affected his respiration. A deeply red sediment appeared in his urine, which adhered to the vessel.

The next day (July 22d) his pain had abated, but he was attacked with

an inflammation of his bowels, *enteritis arthritica*, denoted by violent spasms, excruciating pain and constipation. Pulse 120, and very strong.

Calomel, castor oil, and other active cathartics, with opiates, were administered. On the 23d he was let blood from the arm, which afforded relief, and was not attended with faintness or other signs of debility. For four days he continued in the most imminent danger. On the 26th the pain, &c. abated on passing some wind and afterwards fæces.

Sinapisms had been applied to his wrists on the 21st of July, but they did not produce quite so speedy and violent an effect as before. However, the inflammation which they excited, was so considerable, that he could not be prevailed on to endure the pain they produced longer than two hours and a half, though earnestly recommended by his medical and other friends, and still more by the
salutary

salutary effects which they had before accomplished. In this short time they had caused a very painful tumor of the wrists.

After the 26th of July all the alarming symptoms gradually abated, and health returned with manifest restoration of gout. The wrists had swelled considerably, the fingers became painful, swelled, and very stiff, so that he could but imperfectly employ them, being unable to handle a knife and fork; his knees were swelled, sore and painful; he had at times a pain in the joint of his great toe; and, what is characteristic of gout, these pains were aggravated in the night, about two or three o'clock. His appetite, digestion, good spirits, sleep, and strength were gradually restored by the use of bark and the Bath waters, &c. In cases where the atonic gout affects the stomach and intestines, I have uniformly found the Bath waters preferable to all other remedies,

remedies, having in such complaints a peculiarly cordial, invigorating, and warming quality. Dr. Musgrave, in his *Dissertatio de Arthritide anomala*, published in 1707, observes, (p. 109.) “*Ut autem Aquæ Bathonienses ab antiquo Colicæ, ita quidem ei quæ arthritica est, præ cæteris adversari censentur.*” The experience of another century is now added to confirm what then had been its long established (“*ab antiquo*”) character.

Dr. Stewart, physician at Windsor, and Mr. Hay, were medical witnesses of all the facts above related, and will bear testimony that they are accurately and faithfully related.

Remarks.—It merits particular notice, that venesection was *twice* immediately succeeded by alarming symptoms, and that the application of sinapisms was *twice* immediately succeeded by gout in the wrists, with manifest relief of the dangerous disorders which had proceeded from its
retro-

retrocession. These circumstances greatly increase the evidence, and confirm the conviction, that such events did not proceed from any casual concurrence, but a natural connection of cause and effect.

Gout probably attacks every part of the body, but I do not know whether any case is recorded where it had affected the heart. If, in this patient, there had not been a well founded suspicion, at the commencement of the disorder, that it had proceeded from a retrocession of the gout, a large quantity of blood would undoubtedly have been taken from his arm; and there is much reason to apprehend, that such an evacuation might have produced a fatal effect. This caution appears to be the more necessary, because there is the following observation in a book which is very properly in the hands of every medical reader. In an epidemical *carditis* of 1755, it is recorded, that “*phlebotomiæ alter-*
nis

*nis horis repetebantur ad 4 vel 5 vi-
ces*.*”

In a similar case of *carditis arthritica*, I should now expect more benefit and greater safety from taking blood near the seat of the disease by leeches or cupping. But in this instance, a blister had been unfortunately applied to that part of the thorax, so as to preclude such remedies.

There is another nice question; ought venesection to be employed in the *enteritis arthritica*? For gout in the stomach this remedy has been, I believe, generally prohibited, and on good authority. But when this kind of inflammation attacks the intestines, authors recommend that blood should be taken from the arm. In this patient the inflammation was extremely violent, as denoted by excruciating pain, strong spasms, a full hard pulse, with other symptoms which threatened

* Sauvages. Classis III. Genus xxi. Edit. 1791.

the most imminent danger. The evacuation produced no sense of fainting or debility ; as when gout had attacked the heart. It manifestly gave relief.

P. S. Nov. 7th, 1807. Governor B——, to day, informed me that he had enjoyed good health during the fourteen months which succeeded his illness.

I have seen some cases of what appears to be a peculiar disease, but which has a slight resemblance to chronic rheumatism. As I do not recollect a description of such a malady in medical authors, perhaps it may be useful to suggest to this learned body a few circumstances, which if fully confirmed by their own observations (not otherwise), may deserve to be recorded.

I have known a few examples of
young

young ladies, who have suffered a tedious and irksome confinement for many months, and even years, to their chambers, and even to their beds, by what seems to be merely *muscular debility*. Some had not strength to get up, but were lifted out of bed; others could with difficulty walk a few steps, but such a slight exertion occasioned extreme fatigue. Physicians of skill and experience might call this disorder chronic rheumatism, or palsy, or nervous fever, or hysteria, or might ascribe it to mere fancy and imagination. But, as far as I can judge, it does not proceed from any of these causes. An accurate nosological discrimination of diseases from each other, appears to be conducive, in no small degree, to the most successful method of curing them.

In all the cases which I have recorded, the patients were females in the higher ranks of society, sensible, elegant, and handsome. In most
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of them, the complaint began about twenty years of age. All were unmarried except one, twenty-eight years old, who was mother of several children. All finally recovered, except one, who died of another disease.

Unless this brief notice shall bring similar cases to the recollection of several other physicians, who can by their concurrent testimony recognize this state of *muscular debility* as a separate and serious malady, it can have no claim whatever to obtain the honour of a place in the Medical Transactions of the College.

XXII. *On the Climacteric Disease.* By Sir H. HALFORD, Bart. F.R.S. *Fellow of the Royal College of Physicians, and Physician in Ordinary to the King and to the Prince Regent.*

Read at the COLLEGE, Jan. 13, 1813.

THE human constitution, in its progress to maturity, undergoes repeated changes, by which its energies are developed, and it reaches, at length, that degree of perfection, whatever it may be, of which the individual nature is capable.

Other changes too, of an important kind, generally occur in the decline of life ; and philosophers have amused themselves with calculating the period at which these must happen, from the successive alterations which the frame underwent in early youth ; not taking into their account the influence which moral causes have in our progress through life, in disturbing the regularity of natural processes, nor considering

sidering that various accidents and habits of living more frequently determine the number of a man's years, than the strength of the stamina with which he was born.

It will not be disputed, however, that the alteration of the condition of the system in age, is not so well marked as that which took place in the beginning of life ; and it must be admitted, that in some persons who have reached very great age, no such alteration has been manifested at the epochs which have been called climacteric. The period of the occurrence of this change in men, in general, is so very irregular, that it may be occasionally remarked at any time between fifty and seventy-five years of age, and I will venture to question, whether it be not, in truth, a *disease* rather than a mere declension of strength and decay of the natural powers. To the argument, by which it is maintained that it is mere decay, it may be sufficient

cient to answer, that men frequently *rally* from the languid and feeble condition of their system into which this change had thrown them, become to a certain degree themselves again, and live for years afterwards.

But it appears to me to have the signs of a marked and particular disease, and I would describe it as a falling away of the flesh in the decline of life, without any obvious source of exhaustion, accompanied with a quicker pulse than natural, and an extraordinary alteration in the expression of the countenance.

Sometimes the disorder comes on so gradually and insensibly, that the patient is hardly aware of its commencement. He perceives that he is sooner tired than usual, and that he is thinner than he was; but yet he has nothing material to complain of. In process of time his appetite becomes seriously impaired: his nights are sleepless, or if he get sleep, he is
not

not refreshed by it. His face becomes visibly extenuated, or perhaps acquires a bloated look. His tongue is white, and he suspects that he has fever.

If he ask advice, his pulse is found quicker than it should be, and he acknowledges that he has felt pains occasionally in his head and chest; and that his legs are disposed to swell; yet there is no deficiency in the quantity of his urine, nor any other sensible failure in the action of the abdominal viscera, excepting that the bowels are more sluggish than they used to be.

Sometimes the headach is accompanied with vertigo; and sometimes severe rheumatic pains, as the patient believes them to be, are felt in various parts of the body, and in the limbs; but, on inquiry, these have not the ordinary seat, nor the common accompaniments of rheumatism, and seem rather to take the course of nerves than of the muscular fibres.

In the latter stages of this disease,
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the stomach seems to lose all its powers ; the frame becomes more and more emaciated ; the cellular membrane, in the lower limbs, is laden with fluid ; there is an insurmountable restlessness by day, and a total want of sleep at night ; the mind grows torpid and indifferent to what formerly interested it ; and the patient sinks at last, seeming rather to cease to live, than to die of a mortal distemper.

Such is the ordinary course of this disorder in its most simple form, when it proves fatal. When the powers of the constitution are superior to the influence of the malady, the patient loses his symptoms gradually, recovers his rest and his appetite, and, to a certain degree, his muscular strength and flesh ; but the energies of his frame are never again what they were before, nor does the countenance recover its former volume and expression.

But

But it is seldom that we have an opportunity of observing this malady in its simple form, and never, I believe, but in a patient whose previous life has been entirely healthy. We find it generally complicated with other complaints, assuming their character, and accompanying them in their course, and perhaps this may be the reason why we do not find the climacteric disease described in books of nosology as a distinct and particular distemper. It blends itself with the effects of any fixed organic mischief in the constitution; takes on the appearance of any periodical irritation to which a patient may have been subject, or adopts the features of a casual disease. When it is associated with organic mischief, it is difficult to distinguish the climacteric complaint from that train of symptoms which commonly supervenes, sooner or later, on diseased structure; but its presence ought to be suspect-

ed, if the complaints are all unusually exasperated, if a fatal result be threatened earlier than is usual in the common course of things, and, above all other indications, if that character be impressed on the countenance which peculiarly distinguishes this disorder.

When a patient has been subject frequently to periodical attacks of gout, it readily adopts the signs of this indisposition; but the patient complains that his gout is not so perfect as it ought to be, that the disease lingers, that he does not find the relief he has formerly experienced at the same period of a fit of the gout, and grows wearied at length of repeated efforts made, in vain, to assist him in throwing out a more vigorous disease.

When it combines itself with an accidental disorder, a common cold for instance, the symptoms of catarrh continue to manifest themselves, and even to predominate throughout the
greater

mencement, there is none more frequent than a common cold. When the body is predisposed to this change, any occasion of feverish excitement, and a privation of rest at the same time, will readily induce it. I have known an act of intemperance, where intemperance was not habitual, the first apparent cause of it. A fall, which did not appear of consequence at the moment, and which would not have been so at any other time, has sometimes jarred the frame into this disordered action. A marriage contracted late in life has also afforded the first occasion to this change ; but above all, anxiety of mind and sorrow have laid the surest foundation for the malady in its least remediable form.

The effects of grief on the body, physicians have daily occasion to witness and to deplore ; but they remark, that its influence is very different at an early from what it is at a late period
of

of life. A mind actively engaged, in youth, in the pursuit of fame and fortune, is hardly vulnerable by any disaster which does not immediately stop its career of success; and if a deep impression be made by misfortune, new schemes of ambition, and the gradual influence of time contribute to obliterate it; but sorrow late in life has fewer resources, and more easily lets in disease. Have a man's circumstances been suddenly overwhelmed by some unexpected calamity? There is not time to repair his losses, to recover his station in society, and he pines in gloomy despondency. Or has death inflicted the wound in his peace of mind? At this time of life, it may be, the partner of all his happiness and all his care has been torn from him, or a child, who had grown up to be his comfort and support, or, perhaps, a friend, a contemporary, with his regret for whom there is mixed an apprehension that
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the next blow may fall on himself; and if at this moment, a survey of past life be not more consolatory than the prospect of what remains, adieu! to that animating and enlivening hope — which is cheerfulness — which is health!

Physicians will not expect me to propose a cure for this malady. In fact, I have nothing to offer with confidence, in that view, beyond a caution that the symptoms of the disease be not met by too active a treatment. It is not very improbable that this important change in the condition of the constitution is connected with a deficiency in the energy of the brain itself, and an irregular supply of the nervous influence to the heart. Whatever, therefore, would weaken the general system must be detrimental; and it seems in all cases of this kind more prudent to direct local than general evacuations for the relief of occasional congestions in the blood-vessels.

For the torpor of the stomach and digestive organs the warmer purgatives are generally preferable to those of a saline kind ; and I have often been better satisfied with the effect of the decoctum aloes compositum than that of other evacuants.

If the system appear to be surmounting its difficulties, the Bath water may be recommended with probable advantage, particularly if the stomach has been weakened by intemperance, and still more especially if symptoms of gout shall have been blended with those of the climacteric malady in its course.

For the rest, “ the patient must minister to himself.” To be able to contemplate with complacency either issue of a disorder which the great Author of our being may, in his kindness, have intended as a warning to us to prepare for a better existence, is of prodigious advantage to recovery,

very, as well as to comfort, and the retrospect of a well-spent life is a cordial of infinitely more efficacy than all the resources of the medical art.

XXIII. *On Abdominal Tumor, originating in Lumbar Abscess. By J. LATHAM, M.D. F.R.S. Fellow of the Royal College of Physicians, &c.*

Read at the COLLEGE, Jan. 13, 1813.

HAVING already offered some observations on the subject of abdominal enlargement, I wish to draw the attention of the College to those cases of tumor, which although at first supposed to be affections either of the ovaria or of the bladder, of the caput coli, or of its sigmoid flexure, prove afterwards to have been unconnected with any disease whatever of those parts. The consequence of inflammation originating from mischief in the loins, and terminating in a collection of matter, is too well known to require any minute description. Matter thus formed, and making for itself a passage down the psoas muscle, and thence protruding in different directions, however distant it
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may be from the place where it was originally seated, has universally obtained the name of lumbar abscess.

It may appear strange that lumbar abscess should at any time have been mistaken for a disease of the ovaria, and still more so for a fulness of the bladder, or for an enlargement of any part of the intestinal canal ; but as such mistakes, however, have occurred, I will endeavour to point out the reason of such occurrences, although I may not be able to suggest any remedy to be employed which will certainly avert the advancing mischief.

I suspect that I have seen three cases where matter originally formed in the loins has been collected into a chronic abscess within the abdomen, and made a passage for itself through the vagina ; and I have no doubt that many of those discharges which are conceived to arise from morbid affections of the uterus, and which are
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confounded as to their source, either with a suspected schirrosity, or with an inveterate leucorrhœa, are really purulent, and derive their origin from inflammation arising from a diseased spine. The apparent difference in the number of females below that of males affected with lumbar abscess, may probably be accounted for on this idea.

When a physician is consulted for the first time by a female respecting an abdominal tumor, he is usually informed by the patient herself of its state and its situation, and receives an account which too often will mislead him. When permitted however to examine, he generally finds a fulness more or less circumscribed, which has been of longer or of shorter duration; and he is enabled to ascertain more precisely its situation. If the swelling has taken place without any previous pain about the part, he may
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be assured the swollen part is not the original seat of the disease, and if the tumor has appeared recently, he becomes confirmed in that opinion. If the patient recollects any strain or bruise upon the loins from a fall, or any such accident, a further confirmation respecting the original seat of the disease is immediately afforded him. But whether with or without any such recollection, if the patient has, during a few preceding months, suffered any inconvenience in the loins, which may have been attended with difficulty on locomotion, and with pain in the back, and with aches extending downwards to the thighs, accompanied with restlessness and fever; and if upon the appearance of the tumor, whether sudden or otherwise, the lumbar pains shall have been mitigated, and the febrile symptoms shall have become less urgent, and if upon pressure of the tumor,

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little or no inconvenience or pain is experienced, there can scarcely be a doubt that it is lumbar abscess.

It seldom happens that abscesses so circumstanced open above Poupart's ligament. There is only one case, that of a male, out of the many mentioned in Mr. Abernethy's valuable work on Lumbar Abscesses, where the matter pointed thus. Its almost uniform appearance below the ligament arises, I conceive, from the greater facility of descent afforded to the matter along the psoas muscle, in consequence of the generally erect posture of men; and hence after the usual precursory symptoms, we most commonly find the tumor under the fascia, in the upper and fore part of the thigh, or sometimes behind within the glutæi muscles. Is it accident then that determines the course of the matter generated in the loins through less direct canals, so that it shall sometimes point *above* Poupart's ligament,

ment, instead of making its usual appearance *below* it? or, in consequence of the sedentary lives of women, can any sort of pressure upon parts, or flexure of their position, oppose more than the common impediments to the passage of matter downwards to the thigh, and thereby divert it into other channels? For we have seen that fewer females have the femoral abscess than males. Hence it would be curious to ascertain whether the single instance mentioned by Mr. Abernethy was that of a person employed in any sedentary occupation. I suspect that position actually does determine the matter into more indirect courses, which collecting in a space where it meets the least resistance, forms a chronic abscess, communicating although more circuitously with the original disease in the loins, from whence it is constantly supplied with fresh matter until it either points outwards in the usual manner, or bursts internally as
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in females, emptying itself through the vagina.

The ingenious work to which I have above alluded, will supply us, I believe, with all that is known respecting the most proper methods to be pursued for a cure when an artificial opening is to be made into the tumor. Puncturing it with an abscess lancet so as to let out the matter without admitting the air, and then closing the orifice in the most effectual manner, that it may again speedily heal, is now the most approved method, and this is directed to be repeated three or four times after certain intervals, until no more matter is impelled by coughing into the collapsing cavity. It is then concluded that the fistulous canal from the loins to the abscess is no longer pervious, and that the original disease is removed; the sides of the diminished cyst are then to be agglutinated by inducing an inflammatory action within it, for which purpose it is

is either to be opened freely with a lancet for the admission of air, or more cautiously managed by the insertion of a seton.

What is thus artificially performed in external abscess, nature sometimes in females conducts more secretly, and yet no less securely. If the matter forming the lumbar abscess should in them by any circumstance of position be prevented from descending so low as to the usual outlet under Poupart's ligament, it will take another direction, and an accumulation will be felt within the abdomen, so as to induce even an attentive observer, unless he shall have well considered the previous symptoms, to suppose it an original affection of some of the abdominal viscera. The gradual distension of the abscess, and the consequent pressure upon the surrounding parts, will certainly create some disturbance in the system, and will call for the physician's aid to palliate it. But
nothing

nothing effectual can be done under such circumstances, unless the abscess open for itself a passage in such a direction as to preclude the admission of air within it.

In three persons (as I have already said) I have known such a passage formed into the vagina, and those three are now living, and are in improving health; purulent discharges however after intervals of a few weeks, still continue, previous to which there is always more or less of febrile derangement.

If it were possible for art to imitate in other cases what nature has thus so kindly performed in the three which I have mentioned, I should consider myself fortunate in having drawn the attention of the medical profession to the subject: a nicer mode of discrimination may hereafter enable us to ascertain how far the tumors in question may be pressing towards the vagina, and whether under particular circumstances

stances an artificial opening of the abscess into it might not sometimes be practicable. The previous symptoms, the situation of the tumor on its first appearance, its gradual enlargement, and the subsequent pressure or bearing down, as it is called, of something into the vagina, with an interruption or difficulty in voiding urine, should, having been well considered, induce the physicians to advise an examination per vaginam, when the surgeon might judge whether it were possible then, or at a subsequent period, that his art could render any assistance to the patient. He might or might not be able to afford eventual relief; but the examination would at least satisfy the patient, that there was no uterine mischief concerning which females are too commonly anxious. This being established, however deplorable her situation, it will be a matter of consolation to know that such cases may terminate happily

happily in the manner already described, and that many perhaps have been of the same nature, which were hitherto considered by females themselves, and by their medical attendants, as none other than very troublesome and inveterate cases of leucorrhœa.

When tumor within the abdomen of males is suspected to derive its origin from lumbar abscess, nothing very satisfactory or consoling can be held out to the patient. I remember, however, the case of a boy sixteen years ago, where the abscess pointed above the symphysis of the pubes, and which, from its then uncertain nature, the surgeon opened with as much caution as if he had been operating in a case of hernia. A considerable quantity of pus was discharged through a very small orifice, and the external wound was dressed superficially until after a period of several weeks had elapsed, when the discharge ceased and the wound healed. I have now no doubt,

from the symptoms then present, about the nature of this abscess, although at that time its origin was obscure. For it appears clear, that the matter formed in the loins had made its way for a certain space down the psoas muscle, and that meeting with some impediment from the almost constant sedentary or recumbent posture of the child, it was determined circuitously to the place above stated. The patient did well.

When lumbar abscesses have thus admitted either of a spontaneous or of an artificial opening, the radical cure depends (as we have seen) upon the discharge of the collected matter, and upon the exclusion of the air from the cavity which contained it: a perpetual blister, or the insertion of a seton, or of issues, so as to produce a counter-irritation in the lumbar region, appears to me a practice which should seldom or never be omitted; whilst at the same time we should be employ-

employing such remedies as may regulate the functions of the intestines, and sustain the strength of the patient without stimulating the system.

I am aware that the communication of the matter of lumbar abscess with the vagina, is only capable of direct proof from anatomical examination, which has not yet been afforded me. In the mean time, however, I cannot help expressing my confidence of the fact. First, because in those cases where I suspected its existence, there were present many constitutional and many local symptoms of lumbar abscess: Secondly, because the means employed were suited to the indications of that disease, and were efficacious in restoring the patients to convalescence from a most deplorable state of suffering: And, Thirdly, because although the direct proof is wanting, yet we have a knowledge of the powers of nature generally, and

and the analogy in particular cases of the adhesions of canals with diseased surfaces for the evacuation of matter.

XXIV. *A Case of Intestinal Protrusion per Anum. Communicated by HENRY DAMPIER, Esq. Barrister at Law, to JOHN LATHAM, M. D. &c. and by him to the College.*

Read at the COLLEGE, Jan. 13, 1813.

ALTHOUGH several cases are recorded where, in consequence of umbilical and inguinal herniæ, portions of the intestinal canal mortifying, have sloughed away, and the fæces have ever afterwards been discharged at the navel or the groin, yet I am not aware of any case which, like the following, arose from violence, and where the intestine, in consequence of its protrusion, sphacelated, and the excrementitious matters were still, as in former health, voided per anum.

The memorandum at the foot of the case is in the handwriting of the Rev. Dr. Dampier, and attested by his son, the gentleman, who, through me, presents it to the College.

J. LATHAM.

Harley-street, Dec. 30, 1812.

On

On the 3d of January, 1755, I was called to John, the son of Lancelot Watts (a day-labourer) living at Brunsted, a servant boy to Mr. Pile, a farmer at Westwick, near North Walsham, Norfolk, aged thirteen years: he was overturned in a cart, and thrown flat on his face, with the round or edge of one side of the cart (bottom upwards) whelmed across his loins; the upper part of the body lying beyond the wheel at right angles; in this helpless condition he continued some time; and was found with a very large portion of the intestines forced out at the anus, with the mesentery, and some loose pieces of fat, which I took to be part of the omentum hanging down below the hams, double, like the reins of a bridle, very much distended and inflamed; he had a continual nausea, and violent retchings to vomit, and threw up every thing he took; the pain of the stomach and bowels was exquisite, attended

tended with convulsions, pulse low and quick, and frequently he fell into cold sweats; after using an emollient and spirituous fomentation, I reduced the parts, though to no purpose: the vomiting immediately returned and forced them out again. Next day the fever increased, the nausea and retchings to vomit continued; the parts appeared livid and black, with all signs of a mortification. On the third day the mortification increasing, I cut off the intestine with the mesentery, close to the anus; he had had no stool from the time of the accident, but soon after the operation, there was a very large discharge of blackish and extremely offensive fæces, which continued several days, lessening by degrees; he soon grew easy, the nausea and vomiting abated; I gave him Tinct. cort. Peruv. simpl. twice a day, and as he complained at times of griping pains, he took now and then

then Tinct. Rhatan. vinos. and has recovered a good state of health.

For some time he had six or seven or more stools in a day, at present commonly three or four, all loose, which come soon after eating, and frequently he is obliged to hurry out to ease himself during his meals.

I have three times lately tried if I could discover a passage through the coats of the rectum with my finger, and I think I have always felt an opening just above the sphincter, towards the spine, the circumference of which was full, and protubercated seemingly as large as my finger, the lower edge of which was harder than the rest; he complained of pain when I pressed the upper part.

The intestine cut off measured fifty-seven inches by a string applied to the outer surface.

On the 7th of May, the boy came walking from Brunsted to North Walsham

sham (seven miles), and dined with me ; was perfectly well, and walked back again that afternoon.

This account, given me at Mr. Windham's, at Felbrigg in Norfolk, by his apothecary, Mr. Needham, of North Walsham, who likewise shewed me the above-mentioned intestine, which was cut off and preserved in spirits.

December 1756.

XXV. *Case of Hydrophobia, by* RICHARD PATRICK SATTERLEY, M.D. *Fellow of the Royal College of Physicians, and Physician to the Middlesex and Foundling Hospitals.*

Read at the COLLEGE, March 31, 1813.

THE following case of Hydrophobia occurred at the Middlesex Hospital five years ago, and although the relation of it will add another to the many instances recorded of the inefficacy of medicine in the cure of this complaint, yet on account of the age of the patient, the early attempts to stop the progress of the disease, and the very full trial of the remedies employed in that attempt, I have thought it not undeserving the consideration of the College.

Georgiana James, a child eight years old, was brought to me on the morning of Saturday, the 12th of November, 1808, and from the report of the mother, it appeared that
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the child had been bitten in the lower lip by a dog with which she was playing, about the 20th of August preceding. The wound shortly after it was inflicted was well washed with a strong solution of potash, and in a few days healed. The child experienced little or no inconvenience from the bite, and continued in perfect health until the evening of Thursday, the 10th of November, two days before her admission to the hospital; she then became peevish, hot, and thirsty, complained of great sickness, and vomited frequently and violently. On the 11th she was extremely drowsy, complained sometimes that she was hot and immediately after that she was cold; at times she sweated profusely; she drank freely during the day, and at seven o'clock went to bed; she slept very uneasily, with her eyes wide open, frequently started, and appeared to be slightly convulsed, and her distress was so apparent

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that the mother was induced to rouse her ; she seemed very collected when she was awakened, and drank copiously. She again fell asleep, and soon became burning hot, and her startings returned with more frequency and violence. About three, she called to her mother, complained of being very thirsty, and asked eagerly for drink ; water was immediately brought, but she seemed afraid to swallow it, and made so extraordinary a noise in the attempt, that the mother supposed her to have been seized with croup. Whether she then swallowed or not was not ascertained, but from this period her aversion to liquids was unconquerable, and she did not suffer a single drop to moisten her lips. Such was the history of my little patient as reported by the mother, and by Mr. Webb, a respectable apothecary in the neighbourhood, under whose care she had been.

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The child was examined in the presence of my colleagues ; she seemed to be of sound constitution, was of a dark complexion, quick and intelligent in her manner, and of healthy appearance. Her pulse was unusually rapid (140) and extremely weak but regular ; her tongue was dry, and very slightly coated with a white film ; her skin was of the natural feel and temperature, and her countenance free from any strong marks of anxiety or distress. She made no complaint whatever, insisted upon it that her head, throat, and chest, were free from pain, but on minute inquiry she pointed to the thyroid gland, and just above the centre of the clavicles, where she said she experienced pain whenever she attempted to swallow. Her breathing was generally easy and natural, though interrupted by occasional and involuntary sighing, she had no cough but she seemed to have phlegm in the throat, and was

continually, if left to herself, hawking and making efforts to discharge it; she yawned frequently and was very sleepy, expressing an earnest wish to go to bed; her bowels were soft to the feel, free from uneasiness and distension, and had been opened the day before; she had not swallowed any fluid since three o'clock, nor had she vomited. The bitten part seemed in no respect to differ from the remains or cicatrix of a wound arising from any other cause; there was not the slightest redness or swelling, nor did the roughest pressure on it occasion more pain than in another part. There were no convulsive motions of any of the muscles apparent when the child was left quiet, but if water or any other liquid was offered to her, or if she was exposed to a current of air, a violent action of the muscles of respiration, sobbing and very great general distress was induced. Such was her sensibility to cold,

cold, that it was with extreme difficulty her mother brought her to the hospital, and it was not until her head was closely wrapped up in flannel that she could be taken out of the house, as the least current of air nearly deprived her of the power of breathing. These convulsive actions were most violent on any attempt at swallowing fluids. When water was brought to her she turned her head away from it, and cried out that it would hurt her to swallow. There was no great difficulty, however, in overcoming her repugnance, and persuading her to make the attempt. The moment any fluid was brought near her, she looked very earnestly and anxiously at it, opened her eyes staringly, drew in her breath quickly and forcibly, inspired two or three times very deeply, sobbed aloud, and then hurried the vessel to her mouth, where she held it for some little time, between her teeth, before she could

summon resolution to suffer the fluid to touch her lips; the moment the fluid passed into her mouth, a strong convulsion of all the muscles subservient to deglutition and respiration followed, and her distress was indescribable; a second or a third attempt was attended with less suffering, and afterwards she would swallow without much inconvenience. In the struggle her shoulders were very much elevated, but the abdomen was not distended as in common inspiration, the diaphragm not appearing to act upon the abdominal viscera. In a very few seconds after she had swallowed, her natural actions returned, and she would be easily amused by any childish play. Biscuits, or substances moistened she took with less difficulty than fluids, but the efforts were still considerable; dry biscuits she swallowed readily.

The inefficacy of various powerful antispasmodics, as of musk and opium,

opium, having been ascertained, it was proposed by one of my colleagues to try the internal and external use of Cajaputi oil, a trial which from the impossibility of getting the patient to swallow liquids, was, after the first dose, obliged to be desisted from. The well known efficacy of mercury in changing the secretions and actions of the body, and the belief that if hydrophobia had ever been cured, it was by the agency of this remedy, induced me to direct that 3j of the strong mercurial ointment should be rubbed in every six hours, and that four grains of camphor, two of the submuriate of mercury, and half a grain of opium, should be given every second hour.

About one o'clock she was taken up stairs, and laid on the bed; she slept for more than an hour; but awoke disturbed and agitated, and the spasms and convulsive respirations seemed rapidly increasing. She was

anxious and irritable, and frequently gasped as if suffocation was imminent; she ate two biscuits greedily, and passed about six ounces of urine of a milky colour without any distress. About three o'clock she began the use of the remedies: 3ss. of the ointment was rubbed in on each thigh; the friction was continued for half an hour, and the pills were with great difficulty swallowed in a little currant jelly. At five the pills were repeated, but her aversion to them was almost insurmountable; her pulse was 136, tremulous and irregular, her tongue rather moist, the sighing less frequent, and her manner more composed and tranquil. It was remarkable that she could swallow the currant jelly without the least inconvenience or disinclination if it was set by the fire, and if she was allowed to take it from the saucer in her fingers, but she could not be induced to swallow it out of a tea-spoon; every endeavour
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to take it in that manner producing the convulsive difficulty as on swallowing fluids. In the evening no change in her symptoms was discoverable; she had been greatly distressed in swallowing her pills, and ascribed the difficulty to the camphor, which she said poisoned her; at nine, therefore, she took them without the camphor; and another drachm of the ointment was rubbed in. She swallowed, with considerable efforts, a tea-spoonfull of water, and ate readily some raisins. Her head was shaved and sponged with cold vinegar, but the agitation and suffering consequent to it were indescribable: a blister was applied to the head; soon afterwards she vomited, and then took some cherry brandy and water with little difficulty, frequently dipping her fingers into it, and sucking them without expressing uneasiness.

On the morning of the 13th I learned that the vomiting had continued

tinued with great violence during the night, but that in the intervals she had slept quietly and soundly; that she had swallowed a few spoonfulls of tea, and had taken her medicines, with one exception, regularly. At the time of my visit she swallowed easily, and at her own desire took some tea; the pulse was 88, regular and firm, the skin perfectly cool, and the tongue moist; she conversed with great cheerfulness, and amused herself as if nothing ailed her. She ate for breakfast some warm bread and milk, with little if any reluctance, and without spasm swallowed more than a cupfull of tea. The vomiting all this time continued urgent, and she brought up considerable quantities of phlegm, and occasionally bile, and the ordinary contents of the stomach. A drachm of opium, in ziss. of the Cājaputi oil was rubbed in on the stomach, and a glyster composed of ʒj. of camphor and gr. x. of opium, with ʒij. of oil,

was injected. She did not express the least objection to this remedy, nor did it seem to occasion to her the slightest inconvenience. The whole of this day she swallowed fluids with little if any difficulty or repugnance, calling for drink whenever she felt thirsty. Cold drinks still produced the spasms, as did currents of air, though in a much less degree than before; the medicines were regularly repeated through the day, and a blister was applied to the stomach. In the evening the pulse was 108, the skin hot, the face flushed, the tongue moist, and the gums very slightly reddened; no sighing, no labour in respiration, except on the attempt to swallow cold liquids, or on touching any cold substance. The sight of fluids caused no uneasiness, water was repeatedly poured out from a jug at a little distance from her, but if she was assured that it was not to be brought near her, it excited no irregular action or distress.

distress. The least movement of the water towards her occasioned a scream and very great alarm. The child took, through the whole of the day, nutriment in abundance, and fluids were the chief part of it; but although she swallowed broth or milk; in which there was bread, she could with difficulty be persuaded to swallow either without it, and the attempt generally brought on the spasm though in a much slighter degree. Cold drinks were still productive of the same effect as before; upon the whole, the symptoms were this day much moderated, for, except the distress occasioned by the vomiting, the child seemed to be comfortable.

The report I received on the morning of the 15th was, that the medicines had been regularly persevered in during the night, that the vomiting had been less violent since the application of the blister, but that she had been extremely restless, frequently

quently starting and screaming, and that she had slept but little and swallowed nothing. I found that her tongue was more coated, the pupils of the eyes more dilated, and that she shewed a great aversion to light; a stream of air, or even the act of breathing near her was dreadfully distressing. I offered her some thickened milk and barley water, which she took readily, and after the blisters were dressed, which she had never seemed to feel, and of which she had never complained, she slept quietly for two hours. In the course of this day she took, with great difficulty, a few tea-spoonsfull of cold milk and water; of warm fluids she took at various times half a wine-glass, but always with convulsive efforts. She complained of great thirst, and frequently and eagerly asked for drink; she shewed no disinclination to take what was offered, nor seemed to have an idea of her inability to swallow, until the moment the fluid

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was about to be applied to her lips ; a very slight and inconsiderable redness was observable round the eschar ; she had one loose stool, and passed her urine frequently.

Her pulse, on the morning of the 15th, was quick and small ; the irritability was greatly aggravated ; she was very peevish and restless, turning her head about with astonishing quickness on the least noise ; her countenance was rather flushed and full of anxiety and alarm, but her skin was cool ; the difficulty of swallowing did not seem much aggravated, but the effect of cold air was infinitely more distressing.

About three o'clock in the morning of the 16th, she had become dreadfully convulsed and agitated in any attempt to lie down in bed, screaming and crying out that it hurt her, and took away her breath ; the least approach to the recumbent posture produced a state of agitation
truly

truly horrible, but while sitting in her mother's lap she seemed composed and comfortable ; she had slept but very little in the night, and the little sleep she had was disturbed by twitching and startings. She always awoke terrified, starting up on her legs in a very extraordinary manner. The pupils of the eyes were much dilated, but contracted as in health on exposure to light. Air and light were particularly distressing to her ; she complained much even of the light of a candle, and when the shutters of her room were opened, begged most piteously to have them closed. I found her, about eleven o'clock on that day, tolerably composed, and taking, without any very great inconvenience, some thickened milk. Her pulse was 108, her skin hot and dry, and her countenance flushed ; she had passed her stools and urine naturally, and had taken every three hours during the night, two grains of calomel and one
of

of opium. During the whole of this day she had slept very little, the countenance in the evening was marked with less anxiety, and the impatience to light and air was rather abated. The mercury appeared to be beginning to take effect, the gums were reddened, and the tongue was very foul, but the breath was perfectly untainted, and she had no spitting; her manner was less agitated, she was cheerful, and talked of the dog that bit her, but she was unable to lie down, nor could any persuasions induce her to go to bed, but she slept in the nurse's arms for ten minutes or a quarter of an hour repeatedly. The least degree of cold produced the spasmodic actions, or even touching with her finger a wine glass, or any smooth surface, and it was necessary that the hand should be well warmed before she could bear any one to feel her pulse; *a warm hand occasioned not the least inconvenience.* While she

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was sleeping she was laid down gently in bed, but in a few seconds she started up and screamed out that she was dying. She complained of excessive thirst, but when drink was offered her always refused, and, except a tea-spoonfull of porter, she had swallowed no fluid for twelve hours. In the morning of the 17th, her restlessness became excessive; she started on the slightest noise or motion, and the spasm and difficulty of breathing came on without any apparent exciting cause. Every two or three minutes she gasped for breath, elevating her shoulders, distending most extraordinarily her nostrils, and opening her eyes very widely, and drawing the deepest inspirations. Her countenance was full of terror and wildness; she continued incessantly screaming out that the cold air took away her breath, and entreated to have the bed-curtains drawn close round her, and the light excluded from the room; with

with these precautions she seemed much pleased, and became considerably more composed. In the evening her skin was hot, her pulse too rapid to be numbered, and her tongue covered with a thick yellow fur; her bodily strength however did not seem lessened in any great degree, as she sat up in bed, and moved herself in any manner according to her wants. She expressed a very great dread at being left alone, and frequently supplicated her mother to remain near her; she passed two stools, and made water in moderate quantities and of natural appearance. The marks of any mercurial action were very slight indeed; the redness of the gums was even less than on the preceding evening. The camphor glyster was ordered to be injected at bed-time, and a grain of calomel and opium to be given every ten minutes until the excessive irritability was subdued. After she had taken four pills she became
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more quiet. I visited her in the night, and found her much distressed and anxious ; she had taken neither solid or liquid for many hours ; she talked incessantly on childish subjects, and was easily amused, and although her utterance was rapid and almost muttering, yet she was perfectly collected, and answered rationally to all questions. Her countenance was expressive of the greatest horror ; she was unable to lie down for an instant, and the spasms and difficulty of breathing were almost constant. An attempt to blow her nose was productive of so great a struggle that I thought she would have died. She seemed incapable of causing a forcible expiration through the nose ; while in her spasmodic inspiration, all the air seemed to pass through it, and not through the mouth. Towards morning she became at times incoherent, and complained of a great pain in the throat and stomach, and said the phlegm choked her ; passing
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ing her water, which she did involuntarily, occasioned the utmost possible distress, and her agitation and restlessness were so great as to preclude the possibility of rubbing in the ointment; her body was bent forward, and she became in the course of this day in a perfect state of emprosthotonos, all the muscles of the trunk being rigid, and the chin nearly drawn down to the knees. In the evening she became insensible to all about her, and some ropy matter was observed to flow from her mouth; the quantity of this increased very rapidly, and it was so adhesive that it was with difficulty wiped away. In this state she remained a few hours, when a general convulsion came on, and she threw herself on her back and instantly expired.

Fourteen hours after death the body was opened by my friend Mr. Cartwright, one of the surgeons of the hospital.

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The bitten part was cut through in various directions, but no trace of diseased action could be discovered in it; the salivary glands and the glands of the neck were in a sound state. The trachea was nearly filled with a thick and glutinous mucus, which was continued into the minute ramifications of the bronchiæ, with this trifling difference, that the mucus in the lungs was somewhat thinner. There were patches of inflammation upon the internal surface of the trachea, more particularly on its posterior part.

The œsophagus, from the part where it dips into the chest, and for about three inches towards the stomach, was lined with a thin semitransparent layer of coagulable lymph. The internal surface of the stomach had nothing unusual in its appearance, except at the small arch, where, in a circle of about five inches diameter, it was of a dark bloody hue, approaching to
VOL. IV. B b black;

black; at first this appearance resembled the effusion of blood under the villous coat, but it was found to be an exsudation from the extremities of the blood vessels upon the surface of the stomach, capable of being renewed in a few minutes after it had been cleaned away by a wet sponge; no abrasion of the villous coat was discoverable, nor were any clots of blood mixed with the contents of the stomach. Neither the upper orifice nor the pylorus, nor the intestinal canal, shewed marks of disease. The brain was in a sound state, *unless we except a turgescency of the vessels of the pia mater.*

The quantity of mercury which this child took cannot have passed unobserved. Nearly ʒiiss. of the strong mercurial ointment were rubbed in by proper assistants, and under the immediate direction of Mr. Wellings, then apothecary to the hospital, and at least ʒiss. or nearly ʒij. of the sub-
muriate

mercurate of mercury were taken without producing any, or very trifling appearances of that action usually resulting from it. Her gums were at one time slightly reddened, but they were never sore or spongy; the breath was never tainted, nor was a ptyalism ever excited. So again of opium; twelve or fifteen grains were daily exhibited, and yet the child never appeared more than ordinarily drowsy or stupid.

In regard to the symptoms, I might remark, that vomiting was a very prominent one. This symptom has been unnoticed in most histories of hydrophobia; but in the very singular case communicated to the College by Mr. Wrightson, it appeared as in this, a day or two antecedent to the more characteristic symptoms, and I should think, if the same peculiar inflammatory affection of the stomach should be found in other dissections, that few cases would occur in which

vomiting was not a prominent symptom at some period or other. I ought not to pass unnoticed the fact, that, during the continuance of the vomiting, the hydrophobic symptoms were materially lessened, indeed the quantity of fluid then swallowed was fully adequate to the support and necessity of the child, and the aversion to fluids was exceedingly observable. I would not wish to be understood to draw from this any inference that should without farther experience influence our practice; but in a disease so perfectly obscure, I think it proper to bring into view every appearance, however trivial, that can throw any light upon practice. Another peculiarity in this case was, that morbid sensibility to cold, which indeed was the striking feature of the disease. The effect of cold application to any part of the body was always distressing; and even in the act of swallowing, the temperature of the liquid seemed

seemed the great cause of the convulsions.

The last circumstance I shall remark is, the extent to which this disease was protracted. There are few if any cases of hydrophobia on record, in which death did not terminate the patient's sufferings within four days, whilst the constitution of this little infant was enabled to resist it for seven days after the disinclination to swallow liquids was evident.

To what was this attributable, the power of the remedies employed, or to the absence of that mental irritation which in an adult so strikingly aggravates all the horrors of this disease, and which by many practitioners is *yet* supposed to be the sole cause of it?

XXVI. *Report of the Royal College of Physicians, of London, on Vaccination. With an Appendix, containing the Opinions of the Royal Colleges of Physicians of Edinburgh and Dublin; and of the Royal Colleges of Surgeons of London, of Dublin, and of Edinburgh.*

THE Royal College of Physicians of London, having received his Majesty's commands, in compliance with an Address from the House of Commons, "to inquire into the state of Vaccine Inoculation in the United Kingdom, to report their opinion and observations upon that practice, upon the evidence which has been adduced in its support, and upon the causes which have hitherto retarded its general adoption;"—have applied themselves diligently to the business referred to them.

Deeply impressed with the importance of an inquiry which equally involves the lives of individuals, and the public prosperity, they have made every

every exertion to investigate the subject fully and impartially. In aid of the knowledge and experience of the members of their own body, they have applied separately to each of the Licentiates of the College; they have corresponded with the Colleges of Physicians of Dublin and Edinburgh; with the Colleges of Surgeons of London, Edinburgh, and Dublin; they have called upon the Societies established for Vaccination, for an account of their practice, to what extent it has been carried on, and what has been the result of their experience; and they have, by public notice, invited individuals to contribute whatever information they had severally collected. They have in consequence been furnished with a mass of evidence communicated with the greatest readiness and candour, which enables them to speak with confidence upon all the principal points referred to them.

I. During eight years which have elapsed

elapsed since Dr. Jenner made his discovery public, the progress of Vaccination has been rapid, not only in all parts of the United Kingdom, but in every quarter of the civilized world. In the British islands some hundred thousands have been vaccinated, in our possessions in the East Indies upwards of 800,000, and among the nations of Europe the practice has become general. Professional men have submitted it to the fairest trials, and the public have, for the most part, received it without prejudice. A few indeed have stood forth the adversaries of vaccination, on the same grounds as their predecessors who opposed the inoculation for the small-pox, falsely led by hypothetical reasoning in the investigation of a subject which must be supported, or rejected, upon facts and observation only. With these few exceptions, the testimony in favour of vaccination has been most strong and satisfactory,

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and the practice of it, though it has received a check in some quarters, appears still to be upon the increase in most parts of the United Kingdom.

II. The College of Physicians, in giving their observations and opinions on the practice of vaccination, think it right to premise, that they advance nothing but what is supported by the multiplied and unequivocal evidence which has been brought before them, and they have not considered any facts as proved but what have been stated from actual observation.

Vaccination appears to be in general perfectly safe; the instances to the contrary being extremely rare. The disease excited by it is slight, and seldom prevents those under it from following their ordinary occupations. It has been communicated with safety to pregnant women, to children during dentition, and in their earliest infancy; in all which respects
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it possesses material advantages over inoculation for the small-pox; which, though productive of a disease generally mild, yet sometimes occasions alarming symptoms, and is in a few cases fatal.

The security derived from vaccination against the small-pox, if not absolutely perfect, is as nearly so as can perhaps be expected from any human discovery; for amongst several hundred thousand cases, with the results of which the College have been made acquainted, the number of alleged failures has been surprisingly small, so much so, as to form certainly no reasonable objection to the general adoption of vaccination; for it appears that there are not nearly so many failures, in a given number of vaccinated persons, as there are deaths in an equal number of persons inoculated for the small-pox. Nothing can more clearly demonstrate the superiority of vaccination over the
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inoculation of the small-pox, than this consideration; and it is a most important fact, which has been confirmed in the course of this inquiry, that in almost every case, where the small-pox has succeeded vaccination, whether by inoculation or by casual infection, the disease has varied much from its ordinary course; it has neither been the same in the violence, nor in the duration of its symptoms, but has, with very few exceptions, been remarkably mild, as if the small-pox had been deprived, by the previous vaccine disease, of all its usual malignity.

The testimonies before the College of Physicians are very decided in declaring, that vaccination does less mischief to the constitution, and less frequently gives rise to other diseases, than the small-pox, either natural or inoculated.

The College feel themselves called upon to state this strongly, because
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it has been objected to vaccination, that it produces new, unheard-of, and monstrous diseases. . . Of such assertions no proofs have been produced, and, after diligent inquiry, the College believe them to have been either the inventions of designing, or the mistakes of ignorant men. In these respects then, in its mildness, its safety, and its consequences, the individual may look for the peculiar advantages of vaccination. The benefits which flow from it to society are infinitely more considerable, it spreads no infection, and can be communicated only by inoculation. It is from a consideration of the pernicious effects of the small-pox, that the real value of vaccination is to be estimated. The natural small-pox has been supposed to destroy a sixth part of all whom it attacks; and even in that by inoculation, where it has been general in parishes and towns, about one in 300 has usually died. It is not

not sufficiently known, or not adverted to, that nearly one-tenth, some years more than one-tenth of the whole mortality in London, is occasioned by the small-pox; and however beneficial the inoculation of the small-pox may have been to individuals, it appears to have kept up a constant source of contagion, which has been the means of increasing the number of deaths by what is called the natural disease. It cannot be doubted that this mischief has been extended by the inconsiderate manner in which great numbers of persons, even since the introduction of vaccination, have been every year inoculated with the small-pox, and afterwards required to attend two or three times a week at the places of inoculation, through every stage of their illness.

From this, then, the public are to expect the great and uncontroverted superiority of vaccination, that it communicates no casual infection, and, while

while it is a protection to the individual, it is not prejudicial to the public.

III. The College of Physicians, in reporting their observations and opinions on the evidence adduced in support of vaccination, feel themselves authorised to state that a body of evidence so large, so temperate, and so consistent, was perhaps never before collected upon any medical question. A discovery so novel, and to which there was nothing analogous known in nature, though resting on the experimental observations of the inventor, was at first received with diffidence: it was not, however, difficult for others to repeat his experiments, by which the truth of his observations was confirmed, and the doubts of the cautious were gradually dispelled by extensive experience. At the commencement of the practice, almost all that were vaccinated were afterwards submitted to the inoculation

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of the small-pox ; many underwent this operation a second, and even a third time, and the uniform success of these trials quickly bred confidence in the new discovery. But the evidence of the security derived from vaccination against the small-pox does not rest alone upon those who afterwards underwent variolous inoculation, although amounting to many thousands ; for it appears, from numerous observations communicated to the College, that those who have been vaccinated are equally secure against the contagion of epidemic small-pox. Towns indeed, and districts of the country, in which vaccination had been general, have afterwards had the small-pox prevalent on all sides of them without suffering from the contagion. There are also in the evidence a few examples of epidemic small-pox having been subdued by a general vaccination. It will not, therefore, appear extraordinary that
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many who have communicated their observations should state, that though at first they thought unfavourably of the practice, experience had now removed all their doubts.

It has been already mentioned, that the evidence is not universally favourable, although it is in truth nearly so; for there are a few who entertain sentiments differing widely from those of the great majority of their brethren. The College, therefore, deemed it their duty, in a particular manner, to enquire upon what grounds and evidence the opposers of vaccination rested their opinions. From personal examination, as well as from their writings, they endeavoured to learn the full extent and weight of their objections. They found them without experience in vaccination, supporting their opinions by hearsay information, and hypothetical reasoning, and, upon investigating the facts which they advanced, they found them to be

be either misapprehended or misrepresented; or that they fell under the description of cases of imperfect small-pox, before noticed, and which the College have endeavoured fairly to appreciate.

The practice of vaccination is but of eight years' standing, and its promoters, as well as opponents, must keep in mind, that a period so short is too limited to ascertain every point, or to bring the art to that perfection of which it may be capable. The truth of this will readily be admitted by those acquainted with the history of inoculation for the small-pox. Vaccination is now, however, well understood, and its character accurately described. Some deviations from the usual course have occasionally occurred, which the author of the practice has called spurious Cow Pox, by which the public have been misled, as if there were a true and a false cow-pox; but it appears that nothing

more was meant, than to express irregularity or difference from that common form and progress of the vaccine pustule from which its efficacy is inferred. Those who perform vaccination ought therefore to be well instructed, and should have watched with the greatest care the regular progress of the pustule, and learnt the most proper time for taking the matter. There is little doubt that some of the failures are to be imputed to the inexperience of the early vaccinators, and it is not unreasonable to expect that farther observation will yet suggest many improvements that will reduce the number of anomalous cases, and furnish the means of determining, with greater precision, when the vaccine disease has been effectually received.

Though the College of Physicians have confined themselves in estimating the evidence to such facts as have occurred in their own country, be-
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cause the accuracy of them could best be ascertained, they cannot be insensible to the confirmation these receive from the reports of the successful introduction of vaccination, not only into every part of Europe, but throughout the vast continents of Asia and America.

IV. Several causes have had a partial operation in retarding the general adoption of vaccination; some writers have greatly undervalued the security it affords, while others have considered it to be of a temporary nature only; but if any reliance is to be placed on the statements which have been laid before the College, its power of protecting the human body from the small-pox, though not perfect indeed, is abundantly sufficient to recommend it to the prudent and dispassionate, especially as the small-pox, in the few instances where it has subsequently occurred, has been generally mild and transient. The opinion that vaccination

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tion affords but a temporary security is supported by no analogy in nature, nor by the facts which have hitherto occurred. Although the experience of vaccine inoculation be only of a few years, yet the same disease, contracted by the milkers of cows, in some districts, has been long enough known to ascertain that in them, at least the unsusceptibility of the small-pox contagion does not wear out by time. Another cause, is the charge against vaccination of producing various new diseases of frightful and monstrous appearance.

Representations of some of these have been exhibited in prints in a way to alarm the feelings of parents, and to infuse dread and apprehension into the minds of the uninformed. Publications with such representations have been widely circulated, and though they originate either in gross ignorance, or wilful misrepresentation, yet they have lessened the con-

fidence of many, particularly of the lower classes, in vaccination ; no permanent effects, however, in retarding the progress of vaccination, need be apprehended from such causes, for, as soon as the public shall view them coolly and without surprise, they will excite contempt, and not fear.

Though the College of Physicians are of opinion that the progress of vaccination has been retarded in a few places by the above causes, yet they conceive that its general adoption has been prevented by causes far more powerful, and of a nature wholly different. The lower orders of society can hardly be induced to adopt precautions against evils which may be at a distance ; nor can it be expected from them, if these precautions are attended with expence. Unless therefore from the immediate dread of epidemic small-pox, neither vaccination nor inoculation appear at any time to have been general, and when
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the cause of terror has passed by, the public have relapsed again into a state of indifference and apathy, and the salutary practice has come to a stand. It is not easy to suggest a remedy for an evil so deeply imprinted in human nature. To inform and instruct the public mind may do much, and it will probably be found that the progress of vaccination in different parts of the United Kingdom will be in proportion to that instruction. Were encouragement given to vaccination, by offering it to the poorer classes without expence, there is little doubt that it would in time supersede the inoculation for the small-pox, and thereby various sources of variolous infection would be cut off; but till vaccination becomes general, it will be impossible to prevent the constant recurrence of the natural small-pox by means of those who are inoculated, except it should appear proper to the legislature to adopt, in
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its wisdom, some measure by which those who still, from terror or prejudice, prefer the small-pox to the vaccine disease, may, in thus consulting the gratification of their own feelings, be prevented from doing mischief to their neighbours.

From the whole of the above considerations, the College of Physicians feel it their duty strongly to recommend the practice of vaccination. They have been led to this conclusion by no preconceived opinion, but by the most unbiassed judgment, formed from an irresistible weight of evidence which has been laid before them. For when the number, the respectability, the disinterestedness, and the extensive experience of its advocates, is compared with the feeble and imperfect testimonies of its few opposers; and when it is considered that many, who were once adverse to vaccination, have been convinced by further trials, and are now to be ranked amongst
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its warmest supporters, the truth seems to be established as firmly as the nature of such a question admits; so that the College of Physicians conceive that the public may reasonably look forward with some degree of hope to the time when all opposition shall cease, and the general concurrence of mankind shall at length be able to put an end to the ravages at least, if not to the existence, of the small-pox.

LUCAS PEPYS, *President.*

*Royal College of Physicians,
10th April, 1807.*

JAMES HERVEY, *Register.*

APPENDIX.

N^o I.

TO THE

ROYAL COLLEGE OF PHYSICIANS
OF LONDON.

GENTLEMEN,

I AM ordered by the King and Queen's College of Physicians, in Ireland, to thank the Royal College of Physicians of London, for the communication they have had the honour to receive from them, of certain propositions relative to vaccination, whereon his Majesty has been pleased to direct an inquiry to be instituted, and in the prosecution of which, the co-operation of the College in Ireland is requested.

And

And I am directed to acquaint you, that the said College having referred the investigation of these propositions to a Committee, have received from them a report, of which the inclosed is a copy ; and that they desire the same may be considered as containing their opinion upon the subject.

I have the honour to be,

Gentlemen,

Your most obedient,

Humble servant,

HUGH FERGUSON,

Register.

By order of the King and
Queen's College of Physicians in Ireland.

Dublin, 11th Nov. 1806.

“ The practice of vaccination was introduced into this city about the beginning of the year 1801, and appears to have made inconsiderable progress

progress at first. A variety of causes operated to retard its general adoption, amongst which the novelty of the practice, and the extraordinary effects attributed to vaccination, would naturally take the lead.

“ Variolous inoculation had been long, almost exclusively, in the hands of a particular branch of the profession, whose prejudices and interests were strongly opposed to the new practice; and by their being the usual medical attendants in families, and especially employed in the diseases of children, their opinions had greater effect upon the minds of parents. The small-pox is rendered a much less formidable disease in this country by the frequency of inoculation for it, than it is in other parts of his majesty's dominions, where prejudices against inoculation have prevailed; hence parents, not unnaturally, objected to the introduction of a new disease, rather than not recur to that,
with

with the mildness and safety of which they were well acquainted.

“ In the beginning of the year 1804, the Cow-pox Institution was established under the patronage of the Earl of Hardwicke, and it is from this period that we may date the general introduction of vaccination into this city, and throughout all parts of Ireland.

“ The success of the institution in forwarding the new practice, is to be attributed in a great measure to the respectability of the gentlemen who superintend it, and to the diligence, zeal, and attention of Dr. Labatt, their Secretary and Inoculator. In order to shew the progress which has been made in extending vaccination, your Committee refer to the reports of the Cow-pox Institution for the last two years, and to extracts from their register for the present year.

	Patients Inoculated.	Packets issued to Practitioners in general.	Packets to Army Surgeons.
1804 - -	578	776	236
1805 - -	1,032	1,124	178
1806 - -	1,356	1,340	220
Total -	2,966	3,240	634

“ In the above statement, the numbers are averaged to the end of the present year, on the supposition of patients resorting to the Institution as usual. The correspondence of the Institution appears to be very general throughout every part of Ireland, and by the accounts received, as well from medical practitioners as others, the success of vaccination seems to be uniform

uniform and effectual. At the present period, in the opinion of your Committee, there are few individuals in any branch of the profession, who oppose the practice of vaccination in this part of his majesty's dominions.

“ It is the opinion of your Committee, that the practice of cow-pox inoculation is safe, and that it fully answers all the purposes that have been intended by its introduction. At the same time, your Committee is willing to allow that doubtful cases have been reported to them as having occurred, of persons suffering from small-pox, who had been previously vaccinated. Upon minute investigation, however, it has been found that these supposed instances originated generally in error, misrepresentation, or the difficulty of discriminating between small-pox and other eruptions, no case having come to the knowledge
7
of

of your Committee, duly authenticated by respectable and competent judges, of genuine small-pox succeeding the regular vaccine disease.

“ The practice of vaccination becomes every day more extended ; and, when it is considered that the period at which it came into general use in Ireland is to be reckoned from so late a date, your Committee is of opinion, that it has made already as rapid a progress as could be expected.

(Signed) “ JAMES CLEGHORN.

“ DANIEL MILLS.

“ HUGH FERGUSON.”

N^o II.

Physicians' Hall, Edinburgh, 26th Nov. 1806.

GENTLEMEN,

THE Royal College of Physicians of Edinburgh have but little opportunity

nity themselves of making observations on vaccination, as that practice is entirely conducted by surgeon apothecaries, and other medical practitioners not of their College, and as the effects produced by it are so inconsiderable and slight, that the aid of a physician is never required.

The College know that in Edinburgh it is universally approved of by the profession, and by the higher and middle ranks of the community, and that it has been much more generally adopted by the lower orders of the people than ever the inoculation for small-pox was, and they believe the same to obtain all over Scotland.

With regard to any causes which have hitherto prevented its general adoption, they are acquainted with none, except the negligence or ignorance of parents among the common people, or their mistaken ideas of the impropriety or criminality of being
ing

ing accessory to the production of any disease among their children, or the difficulty or impossibility, in some of our country districts, of procuring vaccine matter, or a proper person to inoculate.

The evidence in favour of vaccination appeared to the Royal College of Physicians of Edinburgh so strong and decisive, that in May last, they spontaneously and unanimously elected Dr. Jenner an Honorary Fellow of their College;—a mark of distinction which they very rarely confer, and which they confine almost exclusively to foreign physicians of the first eminence.

They did this with a view to publish their opinion with regard to vaccination, and in testimony of their conviction of the immense benefits which have been, and which will in future be derived to the world, from inoculation for the cow-pox, and as a mark of their sense of Dr. Jenner's

very great merits and ability in introducing and promoting this invaluable practice.

I have the honour to be,

Gentlemen,

Your most obedient,

Humble servant,

TH. SPENS, C. R. M. E.^d. P.^r.

To the Royal College of
Physicians of London.



N^o III.

At a Special Court of Assistants of the Royal College of Surgeons, convened by order of the Master, and holden at the College on Tuesday the 17th day of March, 1807.

Mr. Governor LUCAS in the Chair :

MR. LONG, as Chairman of the Board of Curators, reported, That the Board are now ready to deliver their report on the subject of vaccination.

It

It was then moved, seconded, and resolved, That a report from the Board of Curators, on the subject of vaccination, which was referred to their consideration by the Court of Assistants, on the 21st day of November last, be now received.

Mr. Long then delivered to Mr. Governor Lucas (presiding in the absence of the Master) a report from the Board of Curators.

It was then moved, seconded, and resolved, That the report, delivered by Mr. Long, be now read; and it was read accordingly, and is as follows :

To the Court of Assistants of the Royal College of Surgeons in London.

The Report of the Board of Curators, on the subject of Vaccination, referred to them by the Court, on the 21st day of November, 1806; made to the Court on the 17th of March, 1807.

THE Court of Assistants having received a letter from the Royal College
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lege of Physicians of London, addressed to this College, stating, That his Majesty had been graciously pleased, in compliance with an address from the Honourable House of Commons, to direct his Royal College of Physicians of London to enquire into the state of vaccination in the United Kingdom, to report their observations and opinion upon that practice, upon the evidence adduced in its support, and upon the causes which have hitherto retarded its general adoption; that the College were then engaged in the investigation of the several propositions thus referred to them, and requesting this College to co-operate and communicate with them, in order that the report thereupon might be made as complete as possible: and having, on the 21st day of November last, referred such letter to the consideration of the Board of Curators, with authority to take such steps respecting the contents thereof

as they should judge proper, and report their proceedings thereon, from time to time, to the Court:—The Board proceeded with all possible dispatch to the consideration of the subject.

The Board being of opinion that it would be proper to address circular letters to the Members of this College, with a view of collecting evidence, they submitted to the consideration of the Court, holden on the 15th day of December last, the drafts of such letter as appeared to them best calculated to answer that end; and the same having been approved by the Court, they caused copies thereof to be sent to all the Members of the College in the United Kingdom, whose residence could be ascertained, in the following form; *viz.*

“ SIR,

“ THE Royal College of Surgeons
being desirous to co-operate with the
Royal

Royal College of Physicians of London, in obtaining information respecting vaccination, submit to you the following questions, to which the favour of your answer is requested.

“ By order of the Court of Assistants,

OKEY BELFOUR, Secretary.

Lincolns-Inn Fields,

Dec. 15, 1806.

“ 1st. How many persons have you vaccinated?

“ 2d. Have any of your patients had the small-pox after vaccination? In the case of every such occurrence, at what period was the vaccine matter taken from the vesicle? How was it preserved? How long before it was inserted? What was the appearance of the inflammation? And what the interval between vaccination and the variolous eruption?

“ 3d. Have any bad effects occurred

curred in your experience in consequence of vaccination? And if so, what were they?

“ 4th. Is the practice of vaccination increasing or decreasing in your neighbourhood; if decreasing, to what cause do you impute it?”

To such letters the Board have received 426 answers; and the following are the results of their investigation :

The number of persons, stated in such letters to have been vaccinated, is 164,381.

The number of cases in which small-pox had followed vaccination is 56.

The Board think it proper to remark under this head, that, in the enumeration of cases in which small-pox has succeeded vaccination, they have included none but those in which the subject was vaccinated by the surgeon reporting the facts.

The

The bad consequences which have arisen from vaccination are, eruptions of the skin in 66 cases, and inflammation of the arm in 24 instances, of which three proved fatal.

Vaccination, in the greater number of counties from which reports have been received, appears to be increasing; it may be proper however to remark, that, in the metropolis, it is on the decrease.

The principal reasons assigned for the decrease are,

Imperfect vaccination,

Instances of small-pox after vaccination,

Supposed bad consequences,

Publications against the practice,

Popular prejudices.

And such report having been considered, it was moved, seconded, and

Resolved, That the report now read, be adopted by this Court, as the answer of the Court to the letter of the Royal College of Physicians, of the

the 23d day of October last, on the subject of vaccination.

Resolved, That a copy of these minutes and resolutions, signed by Mr. Governor Lucas, (presiding at this Court in the absence of the Master) be transmitted by the Secretary to the Register of the Royal College of Physicians.

(Signed)

WM. LUCAS.

N^o IV.

Edinburgh, March 3d, 1807.

SIR,

I MENTIONED in my former letter, that I would take the earliest opportunity of laying before the Royal College of Surgeons of Edinburgh, the communication with which the Royal College of Physicians of London had honoured them, on the 23d of October last:

I am

I am now directed by the Royal College to send the following answer on that important subject.

The practice of vaccine inoculation, both in private, and at the Vaccine Institution established here in 1801, is increasing so rapidly, that for two or three years past, the small-pox has been reckoned rather a rare occurrence, even amongst the lower orders of the inhabitants of this city, unless in some particular quarters about twelve months ago ; and, among the higher ranks of the inhabitants, the disease is unknown.

The Members of the Royal College of Surgeons have much pleasure in reporting, That, as far as their experience goes, they have no doubt of the permanent security against the small-pox which is produced by the constitutional affection of the cow-pox ; and that such has hitherto been their success in vaccination, as also to gain for it the confidence of the public, insomuch

insomuch that they have not been required, for some years past, to inoculate any person with small-pox who had not previously undergone the inoculation with the cow-pox.

The Members of the Royal College have met with no occurrence in their practice of cow-pox inoculation which could operate in their minds to its disadvantage, and they beg leave particularly to notice, that they have seen no instance of obstinate eruptions, or of new and dangerous diseases, which they could attribute to the introduction among mankind of this mild preventive of small-pox. The Royal College of Surgeons know of no causes which have hitherto retarded the adoption of vaccine inoculation here; on the contrary, the practice has become general within this city: and from many thousand packets of vaccine matter having been sent by the Members of the Royal College, and the Vaccine Institution
here,

here, to all parts of the country, the Royal College have reason to believe that the practice has been as generally adopted throughout this part of the United Kingdom as could have been expected from the distance of some parts of the country from proper medical assistance, and other circumstances of that nature.

I have the honour to be,

Sir,

Your most obedient servant,

WM. FARQUHARSON,

President of the Royal College and
Incorporation of Surgeons of Edinburgh.

N^o V.

Royal College of Surgeons in Ireland.

Dublin, February 4th, 1807.

SIR,

I AM directed to transmit to you the inclosed report of a Committee of the
Col-

College of Surgeons in Ireland, to whom was referred a letter from the Royal College of Physicians in London, relative to the present state of vaccination in this part of the United Kingdom ; and to state that the College of Surgeons will be highly gratified by more frequent opportunities of corresponding with the English College of Physicians on any subject which may conduce to the advancement of science, and the welfare of the public.

I have the honour to be,

Sir,

Your most obedient humble servant,

JAMES HENTHORN, Secretary.

At a Meeting of the Royal College of Surgeons in Ireland, holden at their Theatre, on Tuesday the 13th day of January, 1807.

FRANCIS M'EVoy, Esq. President.

MR. Johnson reported from the Committee, to whom was referred a letter from

from the College of Physicians, London, relative to the present state of vaccination in the United Kingdom, &c. &c. That they met, and came to the following resolutions :

That it appears to this Committee, That inoculation with vaccine infection is now very generally adopted by the surgical practitioners in this part of the United Kingdom, as a preventive of small-pox.

That it appears to this Committee, That from the 25th day of March, 1800, to the 25th of November, 1806, 11,504 persons have been inoculated with vaccine infection at the Dispensary for Infant Poor, and 2,831 at the Cow-pox Institution, making a total of 14,335, exclusive of the number inoculated at hospitals and other places, where no registry is made and preserved.

That it is the opinion of this Committee, That the cow-pox has been found to be a mild disease, and rarely attended

attended with danger, or any alarming symptom, and that the few cases of small-pox which have occurred in this country, after supposed vaccination, have been satisfactorily proved to have arisen from accidental circumstances, and cannot be attributed to the want of efficacy in the genuine vaccine infection as a preventive of small-pox.

That it is the opinion of this Committee, That the causes which have hitherto retarded the more general adoption of vaccination in Ireland, have, in a great measure, proceeded from the prejudices of the lower classes of the people, and the interest of some irregular practitioners.

To which report the College agreed.

Extract from the minutes.

JAMES HENTHORN, Secretary.

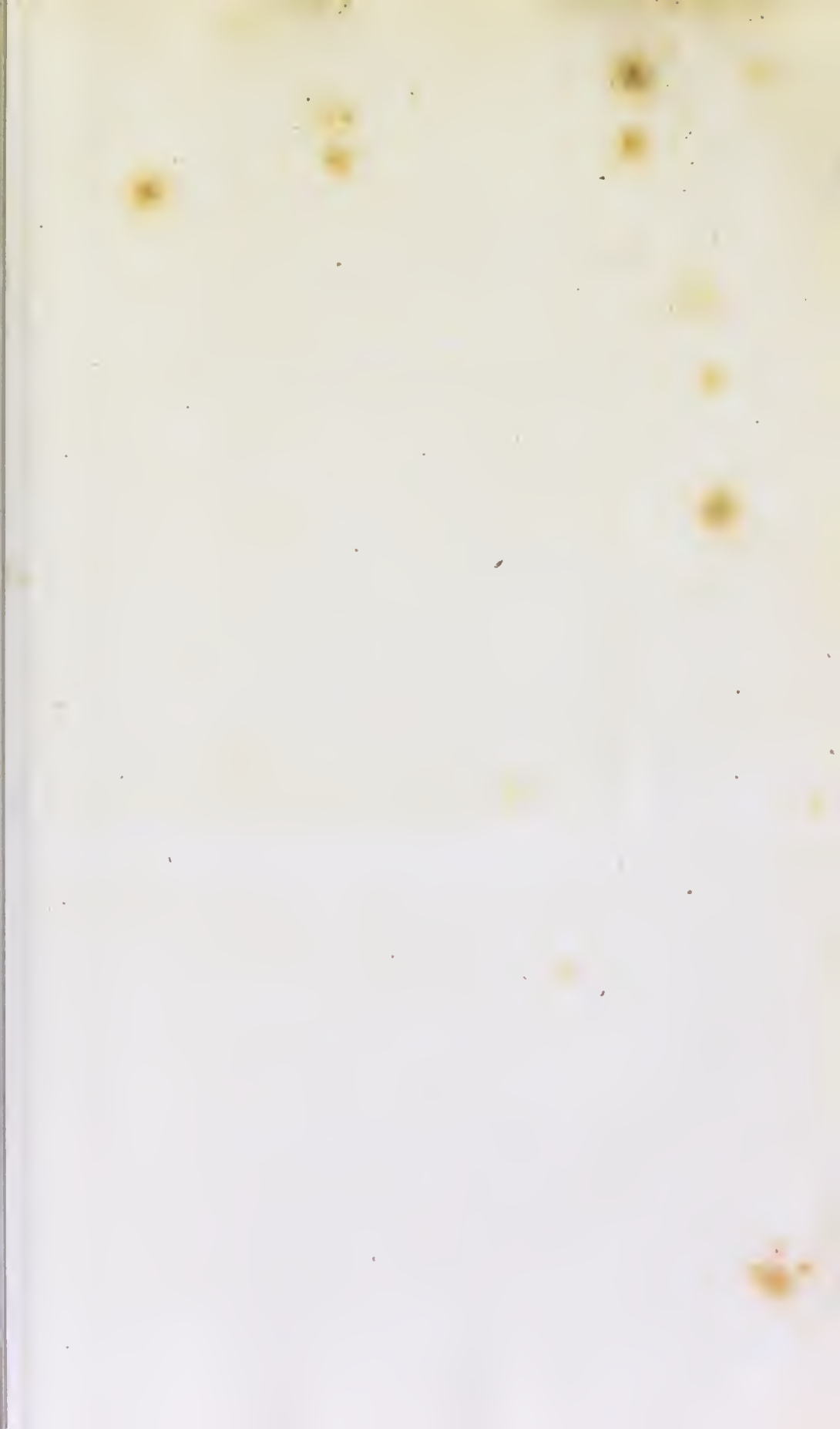
END OF VOL. IV.

ERRATA.

- Page 38, line 14, *for that was, read that I was.*
— 139, in Table, fifth Col. *for 569, read 589.*
— 347, line 4, *after account, read was.*
— 369, line 9, *for bronchia, read bronchia.*







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PREFACE